# QUARTERLY BULLETIN

MARCH 2023

MARCH 2023
No. 307
QUARTERLY BULLETIN
SOUTH AFRICAN RESERVE BANK

# QUARTERLY BULLETIN

MARCH 2023

South African Reserve Bank

Enquiries relating to this *Quarterly Bulletin* should be addressed to:

Head: Economic Statistics Department
South African Reserve Bank
P O Box 427
Pretoria 0001

Tel. +27 12 313 3668/3676

http://www.resbank.co.za

ISSN 0038-2620

Android

iOS

Windows

Printed by the Publishing Section of the South African Reserve Bank

# Contents

## Quarterly economic review

# Quarterly economic review

## Introduction

Economic activity in South Africa decreased in the fourth quarter of 2022. This reflected, among other factors, the increased intensity of electricity load-shedding as well as logistical constraints related to industrial action at Transnet. Real gross domestic product (GDP) reverted from a revised expansion of 1.8% in the third quarter of 2022 to a contraction of 1.3% in the fourth quarter as output declined in the primary, secondary and tertiary sectors. Annual growth in real GDP slowed from 4.9% in 2021 to 2.0% in 2022, with the level of real GDP only 0.3% higher than in 2019 before the onset of the coronavirus disease 2019 (COVID-19) pandemic. Furthermore, real GDP expanded at a seasonally adjusted and annualised average rate of 7.7% during the current upward phase of the business cycle (measured from the third quarter of 2020 to the fourth quarter of 2022) compared with an average rate of contraction of 17.0% during the preceding short downward phase (from the third quarter of 2019 to the second quarter of 2020).[1]

1 For a detailed discussion of recent business cycle developments, see the article titled 'The South African business cycle from 2013 to 2022' on page 107 in this edition of the *Quarterly Bulletin.*

The real gross value added (GVA) by the primary sector contracted by 3.2% in the fourth quarter of 2022 following a strong expansion in the third quarter, as output contracted in both the agricultural and the mining sectors. Agricultural output declined due to the lower production of field crops and horticultural products. Annual growth in agricultural output moderated sharply to 0.3% in 2022 as activity was curtailed by abnormal weather conditions, the outbreak of foot-and-mouth disease, higher input costs and intensified electricity load-shedding. The real GVA by the mining sector contracted anew by 3.2% in the fourth quarter of 2022 as production decreased in 9 of the 12 mineral groups. Annual mining output contracted by 7.0% in 2022 amid the intensified electricity-supply disruptions as well as constraints in rail transportation and harbour capacity.

Real economic activity in the secondary sector also reverted to a decrease in the fourth quarter of 2022 from an increase in the third quarter. The contraction in manufacturing output in the fourth quarter reflected lower durable and non-durable goods production. The real output of the sector supplying electricity, gas and water receded for a third successive quarter as the volume of electricity produced and consumed both decreased, reflecting the continuation of severe load-shedding up to stage 6 during the fourth quarter as well as lower demand from the electricity-intensive mining and manufacturing sectors. By contrast, the real GVA by the construction sector increased marginally in the fourth quarter of 2022 as civil construction and non-residential building activity increased. However, on an annual basis, construction activity has been declining since 2017, with the level of output still 23.1% lower in 2022 than in 2019.

Following four successive quarters of expansion, the real output of the tertiary sector contracted by 1.2% in the fourth quarter of 2022. This was largely due to a notable decrease in the real GVA by the finance, insurance, real estate and business services sector, mainly reflecting a decline in banking, insurance and business services as well as in activities auxiliary to financial intermediation. The contraction in the commerce sector reflected lower output in the wholesale trade as well as the catering and accommodation subsectors, while activity increased in the retail and motor trade subsectors. Growth in the real output of the transport, storage and communication services sector moderated notably in the fourth quarter of 2022. The slowdown reflected a decrease in land freight transportation, weighed down by the industrial action at Transnet, while passenger transportation, air transport and communication services increased.

Real gross domestic expenditure (GDE) decreased marginally by 0.1% in the fourth quarter of 2022 as real final consumption expenditure by general government contracted alongside a slower pace of increase in real inventory holdings. By contrast, real final consumption expenditure by households reverted to an increase in the fourth quarter of 2022 following a small decrease in the third quarter, while real gross fixed capital formation increased at a faster pace. Real net exports and the change in inventories subtracted the most from overall real GDP growth in the fourth quarter of 2022, while real final consumption expenditure by households contributed the most.

The increase in household consumption expenditure in the fourth quarter of 2022 was consistent with the increases in real disposable income and credit extension, and resulted largely from faster growth in real spending on durable goods and services. Purchases of furniture and household appliances, recreational and entertainment goods as well as computers and related equipment increased, while growth in consumer spending on personal transport equipment slowed. Real spending by households on semi-durable goods remained broadly unchanged for a second successive quarter while purchases of non-durable goods decreased slightly further in the fourth quarter of 2022, largely due to lower spending on food, beverages and tobacco as well as medical and pharmaceutical products.

Household debt increased further in the fourth quarter of 2022 as most categories of credit extension to households increased. However, household debt as a percentage of nominal disposable income declined slightly to 62.3% in the fourth quarter as disposable income increased at a faster pace than debt. Households' cost of servicing debt relative to nominal disposable income increased from 7.5% in the third quarter of 2022 to 8.1% in the fourth quarter, reflecting a combination of higher debt and interest rates. Households' net wealth increased in the fourth quarter of 2022 as the increase in the market value of total assets outweighed that in total liabilities. The higher value of assets resulted from an increase in both domestic share prices and housing stock.

Real gross fixed capital formation increased further in the fourth quarter of 2022 due to increased capital spending by private business enterprises and general government, while capital outlays by public corporations decreased. Investment in transport equipment as well as machinery and other equipment contributed the most to the increase. After contracting for five consecutive years, real gross fixed capital formation expanded marginally in 2021 and further by 4.7% in 2022 as capital spending by the private sector increased significantly.

Total household-surveyed employment increased further by 1.1% in the fourth quarter of 2022 due to increases in the formal sector and by private households, while job losses occurred in the informal and agricultural sectors. As the number of unemployed people increased by much less than the number of those employed, the official unemployment rate decreased further to 32.7% in the fourth quarter of 2022. Total employment increased sharply by almost 1.4 million (9.6%) in 2022 following the opening up of the economy after the COVID-19 restrictions, also partly reflecting improvements in the response rate of the *Quarterly Labour Force Survey.*

Year-on-year growth in formal non-agricultural nominal remuneration per worker moderated for a fifth successive quarter to 1.9% in the third quarter of 2022. Nominal remuneration growth per worker slowed in the private sector and contracted at a faster pace in the public sector. This reflected the delayed implementation of the 2022 public sector wage increase and the large number of low-earning youth employed under the Presidential Youth Employment Initiative which lowered the average remuneration per worker. The average wage settlement rate in collective bargaining agreements rose notably to 6.0% in 2022 from 4.4% in 2021, likely reflecting the acceleration in consumer price inflation in 2022.

Growth in labour productivity in the formal non-agricultural sector of the economy accelerated markedly from 0.2% in the second quarter of 2022 to 2.7% in the third quarter, as output growth accelerated while employment growth slowed. By contrast, the change in the nominal unit labour cost in the formal non-agricultural sector reverted from an increase of 3.4% in the second quarter of 2022 to a decrease of 1.1% in the third quarter, as growth in total remuneration slowed while that in output accelerated. After also slowing sharply in the third quarter of 2022, growth in the economy-wide nominal unit labour cost quickened to 2.7% in the fourth quarter as output growth moderated more than growth in the compensation of employees.

Domestic headline producer and consumer price inflation have both decelerated somewhat since July 2022, mainly reflecting decreases in domestic fuel prices due to lower international crude oil prices and the statistical effect of a high base in the preceding year. Despite being above the midpoint of the inflation target range of 4.5% for 22 consecutive months, headline consumer price inflation slowed gradually to 7.0% in February 2023. However, consumer food price inflation accelerated briskly over the past year, to 14.0% in February 2023, despite the marked moderation in global food price inflation in recent months. Core inflation has been accelerating steadily since early 2021 and breached the midpoint of the inflation target range from September 2022, reflecting a broadening in domestic price pressures.

The value of South Africa's merchandise imports increased further in the fourth quarter of 2022 while the value of merchandise and net gold exports decreased. The trade surplus therefore narrowed significantly from R249 billion in the third quarter of 2022 to only R12.2 billion in the fourth quarter. South Africa's terms of trade deteriorated further in the fourth quarter of 2022 as the rand price of imports of goods and services increased while that of exports decreased.

The value of merchandise exports contracted by 8.9% in the fourth quarter of 2022, largely due to a significant decrease in mining exports, particularly mineral products. All export volumes were negatively affected by the Transnet strike that hampered rail freight and port operations in October 2022. The value of mining exports was also impacted by a further decline in most of South Africa's export commodity prices in the fourth quarter of 2022. Manufacturing exports decreased to a lesser extent, while agricultural exports increased.

The further increase in the value of merchandise imports in the fourth quarter of 2022 resulted largely from manufactured products, mostly vehicles and transport equipment as well as machinery and electrical equipment. Mining imports also increased slightly in the fourth quarter, mainly due to higher imports of crude oil, while imports of refined petroleum products decreased. However, on an annual basis, the import value of refined petroleum products rose sharply on account of reduced domestic oil-refining capacity, with the import value of distillate fuel increasing significantly due to, among other factors, strong demand from Eskom for the operation of the open-cycle gas turbines to bolster generating capacity during periods of peak demand.

The shortfall on the services, income and current transfer account narrowed for a second consecutive quarter from R246 billion in the third quarter of 2022 to R186 billion in the fourth quarter, with all three sub-accounts contributing to the smaller deficit. However, this was outweighed by the sizeable narrowing in the trade balance, causing the balance on the current account of the balance of payments to switch to a deficit of R174 billion in the fourth quarter of 2022 from a revised surplus of R3.1 billion in the third quarter.

The net inflow of capital on South Africa's financial account of the balance of payments (excluding unrecorded transactions) increased to R23.5 billion (1.4% of GDP) in the fourth quarter of 2022 from R14.6 billion (0.9% of GDP) in the third quarter. On a net basis, direct investment, other investment and reserve assets recorded inflows while portfolio investment and financial derivatives registered outflows. The cumulative flows on the financial account switched to an inflow of R67.9 billion (1.0% of GDP) in 2022 from an outflow of R244.5 billion (3.9% of GDP) in 2021.

South Africa's total external debt decreased from US$169.3 billion at the end of June 2022 to US$157.9 billion at the end of September, largely due to a decrease in rand-denominated debt. However, expressed in rand terms, South Africa's total external debt increased over this period as the exchange value of the rand depreciated against the United States (US) dollar.

South Africa's positive net international investment position (IIP) increased marginally further from a revised R1 008 billion at the end of June 2022 to R1 065 billion at the end of September. This reflected a smaller decrease in foreign assets than in foreign liabilities and the greater impact of the exchange value of the rand on foreign assets than on foreign liabilities as the nominal effective exchange rate (NEER) of the rand decreased by, on balance, 4.6% in the third quarter of 2022.

The NEER then increased slightly in the fourth quarter of 2022. Despite considerable volatility in the exchange value of the rand during 2022 and significant divergence among currencies, the NEER decreased by only 0.1% from the end of 2021 to the end of 2022. The exchange value of the rand was negatively impacted by the effects of severe electricity load-shedding on the domestic economic growth outlook, which influenced investor sentiment during the second half of 2022. However, the slowdown in consumer price inflation in the US tempered expectations of future interest rate increases and supported the exchange value of the rand against the US dollar for much of the fourth quarter of 2022. The NEER subsequently decreased again by 6.8% from 31 December 2022 to 15 March 2023, initially mostly due to domestic factors but more recently due to increased global risk aversion amid fears of a possible banking crisis in the US and Europe.

International and domestic bond yields increased during most of 2022. This reflected the impact of the war in Ukraine on global inflation and the concomitant monetary policy tightening as well as domestic factors such as higher inflation, the weaker exchange value of the rand and the impact of intensified electricity load-shedding on domestic economic activity. However, domestic bond yields declined during December 2022 and January 2023 amid the slowdown in domestic consumer price inflation and against the backdrop of an expected slower pace of increase in interest rates in the US, before they increased again to mid-March along with the depreciation in the exchange value of the rand.

The total nominal value of outstanding rand-denominated listed and unlisted debt securities issued by residents and non-residents in the domestic primary bond market increased by 10.5% from the end of 2021 to the end of 2022. National government's net bond issuance was 13.6% lower in 2022 than in 2021, reflecting a lower borrowing requirement because of an improved fiscal position. By contrast, net issuance in the domestic primary corporate bond market increased considerably from R9.7 billion in 2021 to R212 billion in 2022, largely due to significant net issuance of short-term unlisted debt securities by banks to fund growing demand for credit extension amid favourable demand conditions.

The value of equity capital raised in the domestic and international primary share markets by JSE-listed companies declined by 63.8% in 2021 and by a further 47.7% in 2022 to only R13.3 billion – the lowest since 1994 – amid the continued challenging economic conditions. Share prices in the domestic share market experienced heightened volatility along a declining trend during most of 2022. Nonetheless, the share prices of JSE-listed companies rebounded towards the end of 2022, with the FTSE/JSE All-Share Index (Alsi), in rand terms, increasing by 14.6% in the fourth quarter to end the year only 0.9% lower than at the end of 2021.

Growth in the broadly defined money supply (M3) moderated slightly to 9.6% in January 2023 after accelerating gradually throughout 2022. The buoyant growth in M3 during the latter part of 2022 was boosted by the corporate sector, particularly financial companies. By contrast, growth in the deposit holdings of the household sector fluctuated lower during the first half of 2022 and remained fairly stable thereafter, likely reflecting the impact of elevated food and fuel prices as well as the higher debt repayment burden amid the rising interest rates.

Growth in total loans and advances extended by monetary institutions to the domestic private sector accelerated to double digits in September 2022 before moderating slightly to 9.7% in January 2023. Following a few years of tepid growth in credit extension, annual average growth accelerated to 7.8% in 2022 – the highest since 2015. Corporate credit was the main driver of overall credit growth over the past year, while growth in credit extended to households was more subdued, driven mostly by unsecured general loans.

The preliminary non-financial public sector borrowing requirement of R75.0 billion in the first nine months of fiscal 2022/23 (April–December 2022) was about half of that in the same period of the previous fiscal year. The significantly lower borrowing requirement reflected the much smaller cash deficit of national government and cash surpluses for all the other spheres of general government. By contrast, non-financial public enterprises and corporations reverted from a cash surplus to a deficit.

National government's cash book deficit of R183.1 billion in the first nine months of fiscal 2022/23 was R36.1 billion less than in the same period of the previous fiscal year as growth in revenue collections was double that in expenditure. The cash book deficit was primarily financed in the domestic financial markets through the net issuance of long-term government bonds and, to a lesser extent, through foreign bonds and loans. National government's total gross loan debt increased to R4 714.3 billion (71.0% of GDP) as at 31 December 2022 as both domestic and foreign debt increased.

# Domestic economic developments

## Domestic output[2, 3]

Economic activity in South Africa contracted in the fourth quarter of 2022 as real *gross domestic product* (GDP) decreased by 1.3% following a revised increase of 1.8% in the third quarter. The contraction in the fourth quarter was broad-based, with activity declining in the primary, secondary and tertiary sectors. The real output of the *non-agricultural sector* contracted by 1.2% in the fourth quarter of 2022 following an expansion of 1.0% in the third quarter.

2 The quarter-to-quarter growth rates referred to in this section are based on seasonally adjusted data but were not annualised, to conform to the official publication by Statistics South Africa (Stats SA).

3 The analysis in this section is based on a revised set of national accounts estimates for 2022 after more detailed data became available.

### Real gross domestic product

Quarter-to-quarter percentage change at seasonally adjusted but not annualised rates

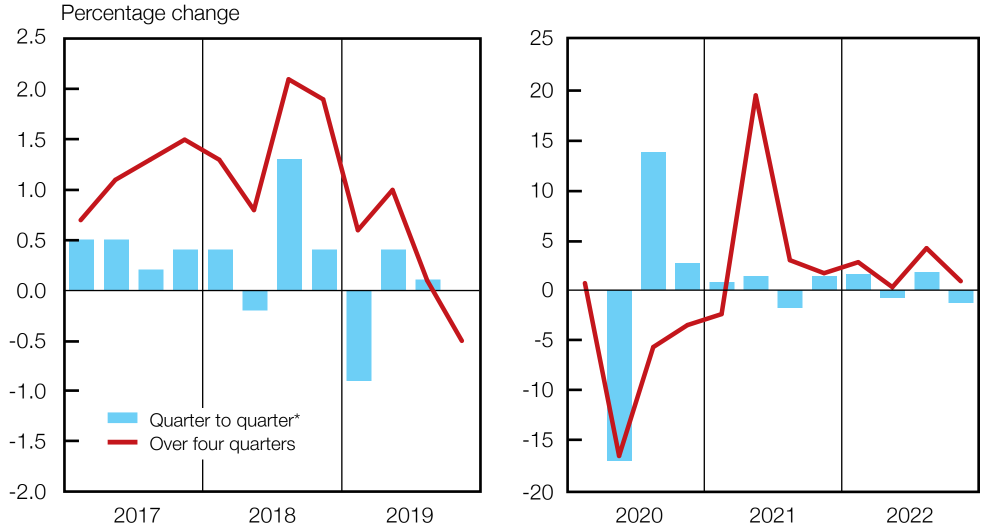
| Sector | 2021 | | | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Year* | Q1 | Q2 | Q3 | Q4 | Year* |
| Primary sector | 4.9 | 5.5 | -10.5 | 3.4 | 10.8 | -2.2 | -6.7 | 11.9 | -3.2 | -4.3 |
| Agriculture | 6.1 | 11.3 | -24.7 | 16.4 | 8.8 | -1.8 | -12.8 | 30.5 | -3.3 | 0.3 |
| Mining | 4.1 | 2.0 | -1.1 | -3.2 | 12.0 | -2.4 | -3.0 | 1.6 | -3.2 | -7.0 |
| Secondary sector | 0.2 | -1.4 | -3.2 | 0.8 | 4.5 | 3.5 | -4.6 | 1.3 | -0.8 | -0.9 |
| Manufacturing | 0.4 | -1.8 | -4.3 | 2.4 | 6.5 | 4.6 | -5.5 | 1.6 | -0.9 | -0.1 |
| Construction | 0.2 | -1.6 | -1.1 | -2.6 | -2.2 | -0.5 | -2.9 | 3.9 | 0.5 | -3.5 |
| Tertiary sector | 0.4 | 1.7 | -0.5 | 1.3 | 4.1 | 1.6 | 0.8 | 0.9 | -1.2 | 3.6 |
| Wholesale and retail trade, catering and accommodation | 0.9 | 3.2 | -4.4 | 3.9 | 6.4 | 3.0 | -1.0 | 1.0 | -2.1 | 3.5 |
| Finance, real estate and business services | 0.9 | -0.5 | 1.2 | -0.7 | 3.3 | 1.9 | 2.4 | 1.6 | -2.3 | 3.9 |
| *Non-primary sector*** | *0.4* | *1.0* | *-1.0* | *1.2* | *4.2* | *2.0* | *-0.3* | *1.0* | *-1.1* | *2.7* |
| *Non-agricultural sector**** | *0.6* | *1.1* | *-1.0* | *0.9* | *4.6* | *1.8* | *-0.4* | *1.0* | *-1.2* | *2.1* |
| **Total** | **0.8** | **1.4** | **-1.8** | **1.4** | **4.9** | **1.6** | **-0.8** | **1.8** | **-1.3** | **2.0** |

* Percentage change over one year
** The non-primary sector represents total GVA excluding agriculture and mining.
*** The non-agricultural sector represents total GVA excluding agriculture.

Source: Stats SA

### Real gross domestic product

Percentage change



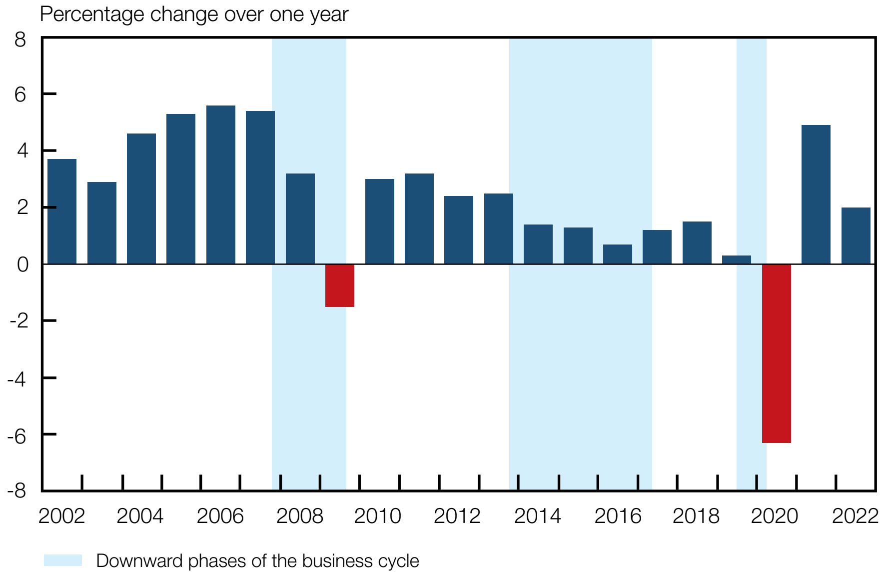

* Seasonally adjusted

Source: Stats SA

The moderation in the rate of increase in annual real GDP to 2.0% in 2022 reflected a contraction in both the primary and the secondary sectors alongside slower growth in the tertiary sector. This followed a strong rebound in annual output growth to 4.9% in 2021 after the COVID-19-induced contraction of 6.3% in 2020. Despite the slowdown, annual output in 2022 was 0.3% more than in 2019. Furthermore, real GDP increased at a seasonally adjusted and annualised average rate of 7.7% during the current upward phase of the business cycle (measured from the third quarter of 2020 to the fourth quarter of 2022) compared with an average rate of *contraction* of 17.0% during the preceding short downward phase (from the third quarter of 2019 to the second quarter of 2020).[4]

4 For a detailed discussion of recent business cycle developments, see the article titled 'The South African business cycle from 2013 to 2022' on page 107 in this edition of the *Quarterly Bulletin.*

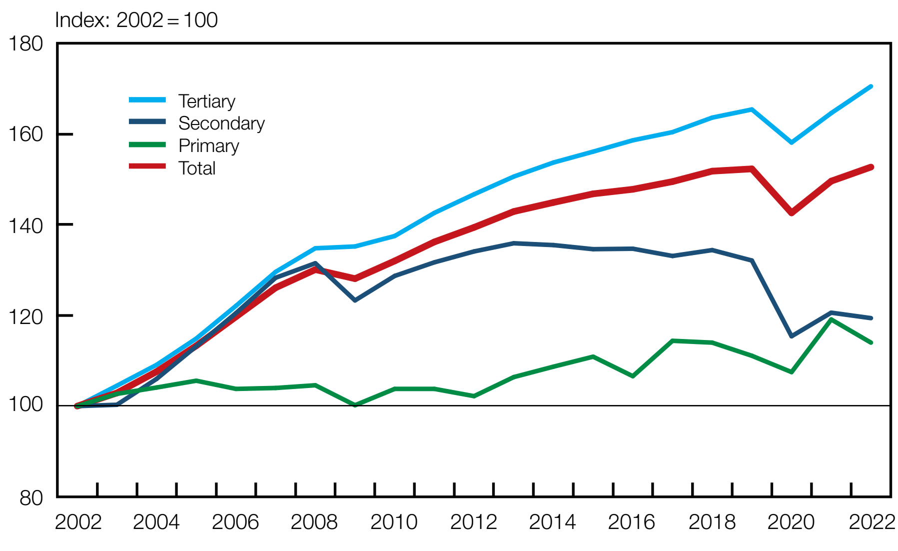
Real gross domestic product




Sources: Stats SA and SARB

The real gross value added (GVA) by the *primary sector* contracted by 3.2% in the fourth quarter of 2022 following a strong expansion of 11.9% in the third quarter, as output in both the agricultural and the mining sectors contracted. Real output of the primary sector contracted by 4.3% in 2022 following a substantial increase of 10.8% in 2021, as growth in the real GVA by the agricultural sector moderated sharply while that by the mining sector contracted.

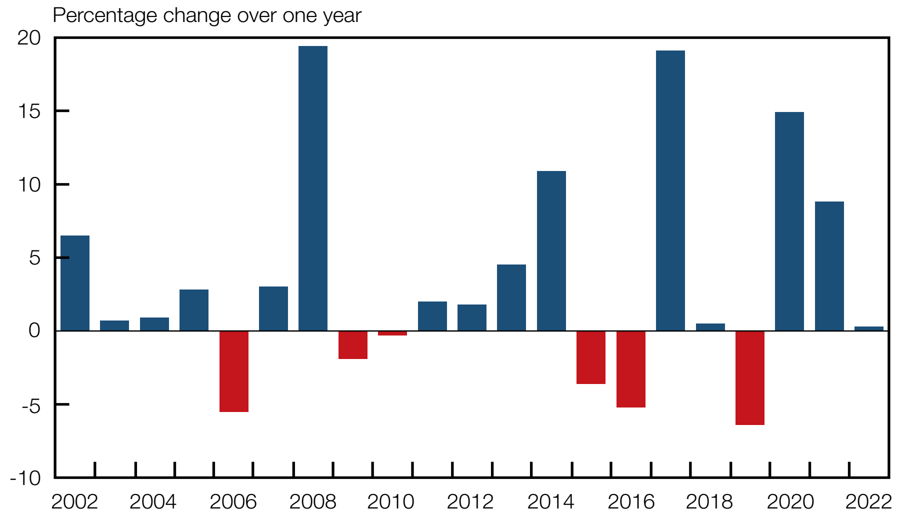
Real gross value added by main sectors




Source: Stats SA

Following a revised strong expansion of 30.5% in the third quarter of 2022, the real output of the *agricultural sector* contracted by 3.3% in the fourth quarter due to the lower production of field crops and horticultural products. Annual growth in agricultural output moderated markedly to 0.3% in 2022, mainly due to lower field crop harvests, especially of maize and sugar cane. In addition, the spread of foot-and-mouth disease contributed significantly to a decline in the slaughtering of cattle. Activity in the agricultural sector in 2022 was further suppressed by abnormal weather conditions, rising input costs, intensified electricity load-shedding and supply chain disruptions related to geopolitical tensions. Despite the sharp moderation in annual output growth in 2022, the level of real GVA by the agricultural sector in 2022 was still 25.4% higher than in 2019 given the solid growth of 14.9% in 2020 and 8.8% in 2021.

Real gross value added by the agricultural sector




Source: Stats SA

Commercial maize crop and area planted

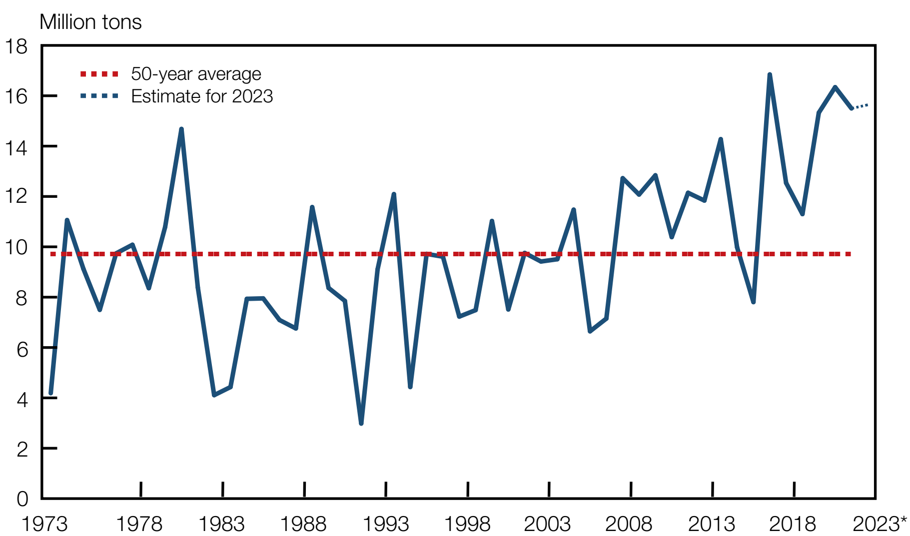
| | Crop (million tons) | Area planted (million hectares) |
|---|---|---|
| 2021/22: final | 15.5 | 2.6 |
| 2022/23: estimate | 15.6 | 2.6 |

Source: Crop Estimates Committee of the Department of Agriculture, Land Reform and Rural Development

The first estimate of the 2022/23 commercial maize harvest of 15.6 million tons was 0.9% higher than the final 2021/22 crop. Therefore, production should still comfortably exceed the estimated domestic consumption of about 11.8 million tons per annum as well as the 50-year average of 9.7 million tons. At 2.6 million hectares, the area planted in the 2022/23 season is 1.5% smaller than in the previous season due to excessive rainfall in some of the maize-planting areas as well as higher operating costs.

The real output of the *mining sector* contracted anew by 3.2% in the fourth quarter of 2022 and subtracted 0.1 percentage points from overall real GDP growth after increasing by 1.6% in the third quarter. Production decreased in 9 of the 12 mineral groups – notably diamonds, iron ore, platinum group metals (PGMs), manganese ore and coal – which was somewhat offset by increased production of gold, copper and building materials. The lower production of coal reflected subdued demand for electricity generation and industrial uses, while weak industrial demand for steel, mainly from China, weighed on the production of iron ore. PGM production was affected by ageing infrastructure and a decline in the quality of grades extracted. The increase in gold production in the fourth quarter of 2022 was underpinned by the continued recovery after the three-month-long industrial action at a large gold-mining company in the second quarter.

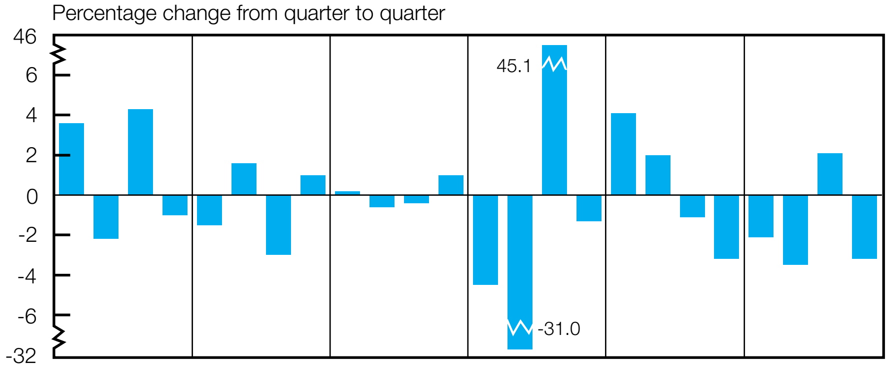
Commercial maize production



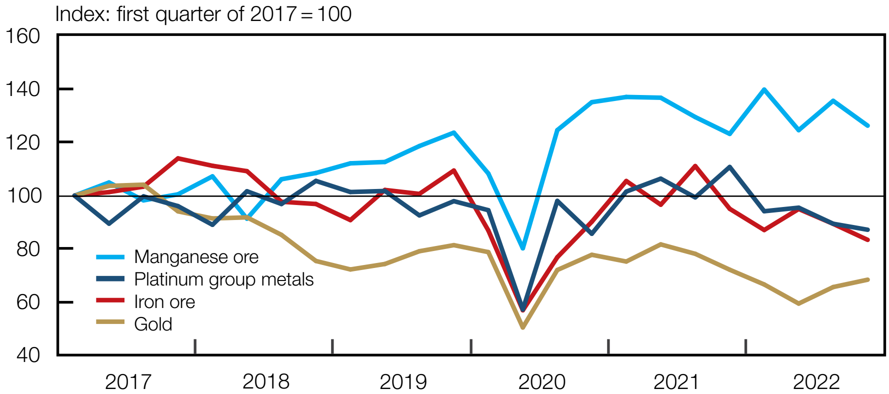

* Calendar-year 2023 equals production season 2022/23

Sources: Crop Estimates Committee of the Department of Agriculture, Land Reform and Rural Development and SAGIS

Real gross value added by the mining sector




Physical volume of mining production: selected subsectors



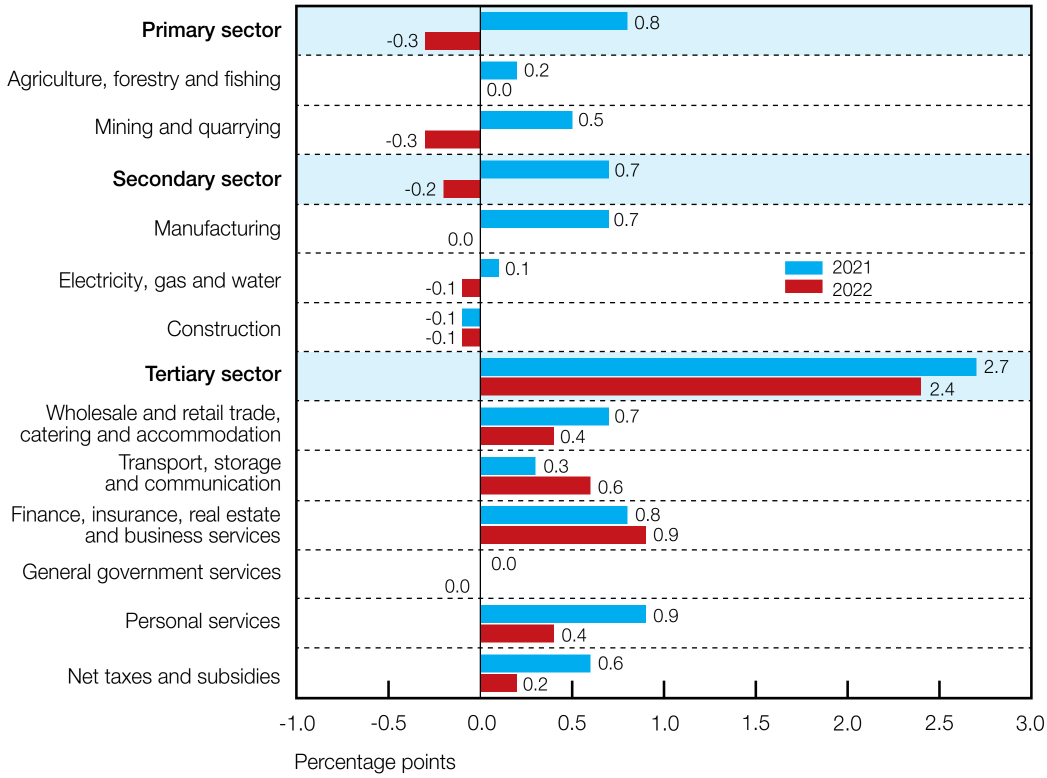

Seasonally adjusted

Source: Stats SA

The decline in mining output in three of the quarters in 2022 culminated in an annual contraction of 7.0% as the production of PGMs, gold, iron ore and coal decreased, subtracting 0.3 percentage points from overall GDP growth. This followed a notable expansion of 12.0% in 2021.

Coal production has been trending lower since the beginning of 2022 as output continues to be impeded by intensified electricity-supply disruptions and subdued activity in the manufacturing sector as well as the effect of insufficient rail and harbour capacity on exports. Mining output has also been suppressed by higher operating costs, labour strikes, an uncertain policy environment and subdued investment. Consequently, the level of real GVA by the mining sector in 2022 was still 8.1% less than in 2019.

Contributions to growth in real gross domestic product

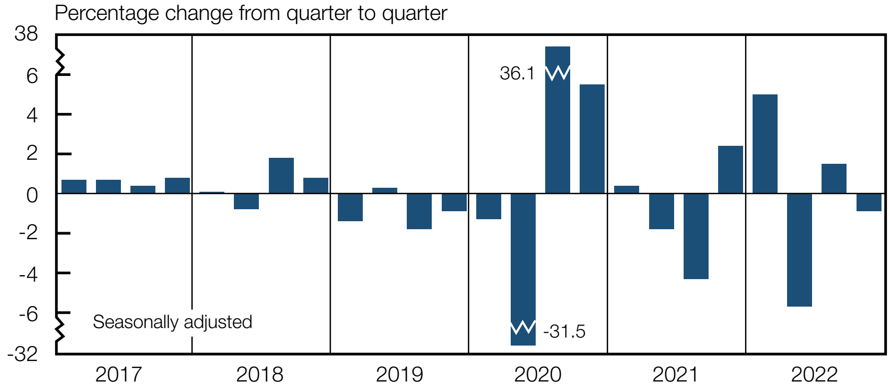



Source: Stats SA

The real GVA by the *secondary sector* decreased by 0.8% in the fourth quarter of 2022 following an increase of 1.3% in the third quarter. Real output decreased in the manufacturing as well as electricity, gas and water sectors, while activity in the construction sector increased slightly in the fourth quarter. On an annual basis, the real GVA by the secondary sector contracted by 0.9% in 2022 following an increase of 4.5% in 2021, and the level of real GVA was 9.6% less than in 2019 – on par with that last attained in early 2006.

Following an expansion of 1.6% in the third quarter of 2022, the real GVA by the *manufacturing sector* contracted by 0.9% in the fourth quarter and subtracted 0.1 percentage points from overall GDP growth. The production of both durable and non-durable manufactured goods contracted in the fourth quarter of 2022. Production decreased in 5 of the 10 manufacturing subsectors in the fourth quarter, namely: food and beverages; basic iron and steel, non-ferrous metal products, metal products and machinery; wood and wood products, paper, publishing and printing; and motor vehicles, parts and accessories as well as other transport equipment. By contrast, the production of petroleum, chemical products, rubber and plastic products as well as electrical machinery increased.

Real gross value added by the manufacturing sector




Contributions to manufacturing production: fourth quarter of 2022*


Percentage points, seasonally adjusted
*See text for the full description of subsectors

Source: Stats SA

Manufacturing activity was weighed down by intensified electricity load-shedding, rising input costs, lower export demand due to slower global economic growth as well as the labour strike at Transnet in October 2022 that disrupted supply chains and negatively impacted on logistics. The lower level of production was also reflected in the slight decrease in the seasonally adjusted utilisation of production capacity in the manufacturing sector, from 78.5% in August 2022 to 78.3% in November.

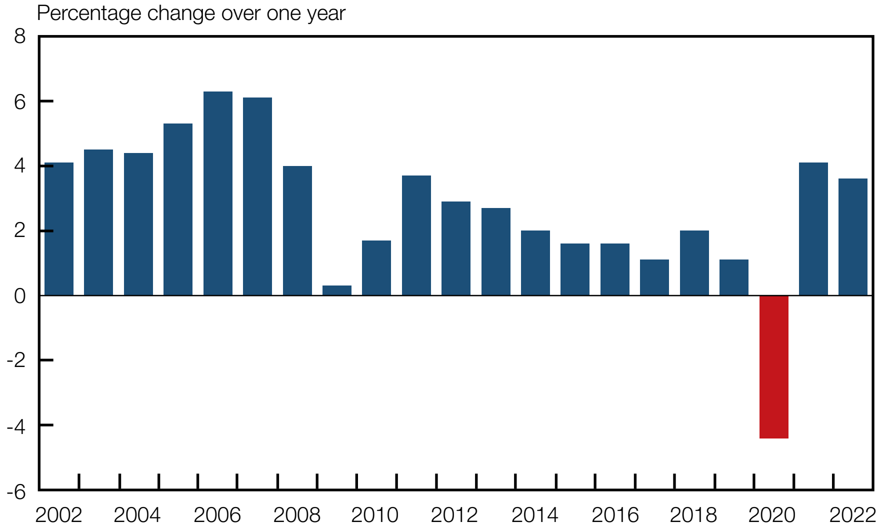
Following a robust expansion of 6.5% in 2021, manufacturing output contracted slightly by 0.1% in 2022, arresting the post-pandemic recovery. The level of real GVA by the manufacturing sector was still 6.8% lower in 2022 than in 2019. The decrease in 2022 reflected lower production volumes of: petroleum and chemical products; rubber and plastic products; wood and wood products; paper, publishing and printing; basic iron and steel, non-ferrous metal and metal products; and machinery.

The real output of the sector supplying *electricity, gas and water* receded further by 1.9% in the fourth quarter of 2022, marking the third consecutive quarterly decline. The volume of electricity produced and consumed both decreased, reflecting the continuation of severe load-shedding up to stage 6 during the fourth quarter as well as weak demand from the electricity-intensive mining and manufacturing sectors. In addition, electricity generation capacity was constrained by unplanned maintenance due to numerous breakdowns. On an annual basis, the real output of the electricity production subsector decreased in 2022, which contributed to an annual contraction of 2.6% in the real GVA by the electricity, gas and water sector. Consequently, the level of real output of the sector still remained 6.3% lower than the pre-pandemic level in 2019.

Real GVA by the *construction sector* increased marginally by 0.5% in the fourth quarter of 2022 as civil construction and non-residential building activity increased slightly. On an annual basis, activity levels in the construction sector have been declining since 2017, with output contracting by 3.5% in 2022. The sector was negatively impacted on by subdued investor and business sentiment, a constrained fiscal position and the lingering effects of the pandemic. The construction sector was the only sector not to have recovered in either 2021 or 2022 from the pandemic-induced low in 2020. Consequently, the level of real activity in the construction sector was 23.1% lower in 2022 compared with 2019.

Following four successive quarters of expansion, the real GVA by the *tertiary sector* contracted by 1.2% in the fourth quarter of 2022. Real output decreased in the commerce; finance, insurance, real estate and business services; and general government services sectors. Growth moderated in the transport, storage and communication services sector while accelerating in the personal services sector. On an annual basis, the output of the tertiary sector increased further by 3.6% in 2022 following the increase of 4.1% in 2021 and contributed the most to overall real GDP growth in 2022 at 2.4 percentage points.

Real gross value added by the tertiary sector




Source: Stats SA

The real output of the *commerce sector* contracted by 2.1% in the fourth quarter of 2022 following an expansion of 1.0% in the third quarter. Real economic activity decreased in the wholesale trade as well as catering and accommodation subsectors but increased in the retail and motor trade subsectors.

In the retail trade subsector, activity increased marginally in the following categories: textiles, clothing, footwear and leather goods; food, beverages and tobacco; and all other retailers – supported by Black Friday promotions in November 2022 and festive season spending. The motor trade subsector continued to benefit from strong sales of new and used vehicles despite the higher interest rates. The decrease in the wholesale trade subsector reflected lower sales of: food, beverages and tobacco; textiles, clothing and footwear; agricultural raw material; and precious stones, jewellery and silverware.

Growth in the output of the commerce sector moderated to 3.5% in 2022 following a robust increase of 6.4% in 2021. The slowdown reflected the adverse impact of intensified electricity-supply disruptions as well as higher consumer price inflation and interest rates which led to more subdued household demand. Despite two consecutive years of fairly strong growth, the level of real output in the commerce sector in 2022 was still 3.6% lower than in 2019.

Growth in the real output of the *transport, storage and communication services sector* moderated to 0.7% in the fourth quarter of 2022 from 3.6% in the third quarter. The deceleration reflected reduced activity in land freight transportation, weighed down by industrial action at

Transnet, while passenger transportation, air transport and communication services increased in the fourth quarter. Nevertheless, the transport, storage and communication services sector was the only sector where output expanded in all four quarters of 2022, resulting in annual growth of 8.6%, which contributed 0.6 percentage points to overall GDP growth in 2022. Despite the significant increase, the level of real output in this sector was still 3.8% lower than in 2019.

The real GVA by the *finance, insurance, real estate and business services sector* contracted by 2.3% in the fourth quarter of 2022 following an increase of 1.6% in the third quarter. This mainly reflected a decrease in banking, insurance and business services activity as well as activity auxiliary to financial intermediation. However, annual growth in this sector accelerated to 3.9% in 2022 from 3.3% in 2021 and contributed 0.9 percentage points to growth in overall real GDP. Consequently, the level of real output of the finance, insurance, real estate and business services sector was 8.0% higher in 2022 than in 2019.

The real GVA by the *general government services sector* decreased by 0.7% in the fourth quarter of 2022, reflecting a decline in the number of government employees. The annual output in the general government services sector contracted by 0.3% in 2022.

The real GVA by the *personal services sector* increased by 0.2% in the fourth quarter of 2022 following a decrease of 1.3% in the third quarter. This reflected increased activity in community services. Annual growth in the personal services sector moderated to 2.7% in 2022 from 5.5% in 2021.

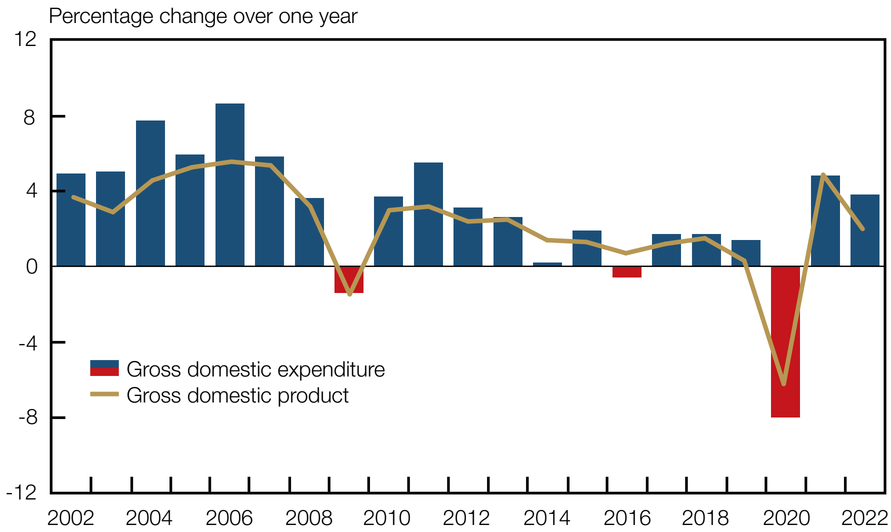
## Real gross domestic expenditure[5, 6]

Real *gross domestic expenditure* (GDE) decreased marginally by 0.1% in the fourth quarter of 2022 following an increase of 0.8% in the third quarter. Real final consumption expenditure by general government contracted alongside a slower pace of increase in real inventory holdings. By contrast, real final consumption expenditure by households reverted to an increase in the fourth quarter of 2022 following a small contraction in the third quarter, while real gross fixed capital formation increased at a faster pace. The rate of expansion in real GDE moderated to 3.8% in 2022 from 4.8% in 2021, consistent with that in real GDP. Despite the moderation in 2022, the annual level of real GDE was 0.1% higher than in 2019.

5 The quarter-to-quarter growth rates referred to in this section are based on seasonally adjusted data but were not annualised, to conform to the official publication by Stats SA.

6 The analysis in this section is based on a revised set of national accounts estimates for 2022 after more detailed data became available.

Real gross domestic product and expenditure




Sources: Stats SA and SARB

### Real gross domestic expenditure

Quarter-to-quarter percentage change at seasonally adjusted but not annualised rates

| Component | 2021 | | | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Year[1] | Q1 | Q2 | Q3 | Q4 | Year[1] |
| Final consumption expenditure | | | | | | | | | | |
| Households | 0.5 | 1.6 | -2.8 | 3.0 | 5.6 | 1.0 | 0.4 | -0.3 | 0.9 | 2.6 |
| General government | -0.6 | 0.4 | 0.5 | 0.2 | 0.6 | 1.1 | -1.0 | 0.6 | -0.7 | 0.9 |
| Gross fixed capital formation | -3.1 | -0.3 | -1.1 | 1.6 | 0.2 | 3.5 | 0.3 | 0.3 | 1.3 | 4.7 |
| **Domestic final demand[2]** | **-0.2** | **1.1** | **-1.9** | **2.2** | **3.8** | **1.4** | **0.1** | **-0.1** | **0.7** | **2.6** |
| *Change in inventories (R billions)[3]* | *-21.8* | *-41.6* | *6.0* | *-25.0* | *-20.6* | *9.0* | *35.9* | *69.5* | *29.4* | *36.0* |
| *Residual[4]* | *0.3* | *0.3* | *0.3* | *0.2* | *0.3* | *0.1* | *0.1* | *0.2* | *0.3* | *0.2* |
| Gross domestic expenditure[5] | 2.1 | 0.7 | -0.8 | 1.4 | 4.8 | 2.0 | 0.7 | 0.8 | -0.1 | 3.8 |

1 Percentage change over one year
2 Comprises final consumption expenditure by households and general government as well as gross fixed capital formation
3 At constant 2015 prices. Seasonally adjusted and annualised
4 The residual as a percentage of GDP
5 Including the residual

Sources: Stats SA and SARB

Real net exports and the change in inventories subtracted 1.1 and 0.9 percentage points respectively from overall real GDP growth in the fourth quarter of 2022. By contrast, real final consumption expenditure by households and gross fixed capital formation contributed 0.6 percentage points and 0.2 percentage points respectively. On an annual basis, real final consumption expenditure by households contributed the most to growth in real GDP in 2022 at 1.7 percentage points, while real net exports deducted 1.7 percentage points from the 2.0% growth over the period.

### Contributions of expenditure components to growth in seasonally adjusted but not annualised real gross domestic product

Percentage points

| Component | 2021 | | | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Year | Q1 | Q2 | Q3 | Q4 | Year |
| Final consumption expenditure | | | | | | | | | | |
| Households | 0.4 | 1.0 | -1.8 | 2.0 | 3.7 | 0.7 | 0.3 | -0.2 | 0.6 | 1.7 |
| General government | -0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | -0.2 | 0.1 | -0.1 | 0.2 |
| Gross fixed capital formation | -0.5 | 0.0 | -0.2 | 0.2 | 0.0 | 0.5 | 0.0 | 0.0 | 0.2 | 0.7 |
| Change in inventories | 2.0 | -0.4 | 1.0 | -0.7 | 0.9 | 0.8 | 0.6 | 0.7 | -0.9 | 1.3 |
| Residual | 0.2 | 0.0 | 0.0 | -0.1 | 0.1 | -0.1 | 0.0 | 0.1 | 0.1 | -0.1 |
| Gross domestic expenditure | 2.0 | 0.7 | -0.8 | 1.4 | 4.8 | 2.0 | 0.7 | 0.8 | -0.1 | 3.8 |
| Net exports | -1.2 | 0.7 | -1.0 | -0.1 | 0.1 | -0.4 | -1.5 | 1.0 | -1.1 | -1.7 |
| Gross domestic product | 0.8 | 1.4 | -1.8 | 1.4 | 4.9 | 1.6 | -0.8 | 1.8 | -1.3 | 2.0 |

Components may not add up to totals due to rounding off.

Sources: Stats SA and SARB

The real *exports* of goods and services decreased by 4.8% in the fourth quarter of 2022 following an increase of 3.8% in the third quarter. The real exports of mining products contracted as the decline in the export volumes of mineral products as well as base metals and articles thereof outweighed the increase in precious metals (including gold, PGMs and stones). The export volumes of manufactured goods switched to a contraction in the fourth quarter of 2022 as the following exports declined: machinery and electrical equipment; chemical products; and prepared foodstuffs, beverages and tobacco. The export volumes of vehicles and transport equipment reverted to an increase in the fourth quarter of 2022. The further increase in agricultural export volumes was supported by vegetable products. The export volumes of services also increased further in the fourth quarter of 2022, albeit at a slower pace.

## Real exports and imports of goods and services

Quarter-to-quarter percentage change*

| Component | 2022 | | | | | |
|---|---|---|---|---|---|---|
| | Exports | | | Imports | | |
| | Percentage of total** | Q3*** | Q4*** | Percentage of total** | Q3*** | Q4*** |
| **Total** | **100.0** | **3.8** | **-4.8** | **100.0** | **0.1** | **-0.8** |
| **Mining** | **42.5** | **1.1** | **-8.1** | **19.4** | **-1.4** | **-0.4** |
| *Of which:* | | | | | | |
| Mineral products | 16.1 | 9.2 | -11.8 | 13.9 | -1.3 | 0.2 |
| Precious metals, including gold, platinum group metals and stones | 13.1 | -14.0 | 5.3 | 1.1 | -19.6 | 19.9 |
| Base metals and articles thereof | 13.3 | 7.7 | -15.0 | 4.4 | 3.2 | -6.8 |
| **Manufacturing** | **36.7** | **4.4** | **-5.5** | **62.6** | **-1.6** | **1.8** |
| *Of which:* | | | | | | |
| Vehicles and transport equipment | 10.7 | -2.1 | 5.7 | 12.6 | -6.5 | 34.4 |
| Machinery and electrical equipment | 7.9 | 2.7 | -3.8 | 22.7 | 1.1 | -0.9 |
| Chemical products | 6.3 | -7.3 | -10.2 | 12.0 | -8.1 | -10.2 |
| Prepared foodstuffs, beverages and tobacco | 4.3 | 5.8 | -7.6 | 2.1 | -3.7 | -6.2 |
| **Agriculture** | **9.4** | **9.0** | **5.7** | **4.4** | **1.6** | **-15.7** |
| *Of which:* | | | | | | |
| Vegetable products | 8.0 | 12.2 | 6.3 | 2.1 | -12.2 | 5.4 |
| **Services** | **11.0** | **6.9** | **2.8** | **13.5** | **10.0** | **-8.2** |

* Based on seasonally adjusted and annualised data
** Expressed as a percentage of the total in 2022
*** Not annualised
Components may not add up to totals due to rounding off and the exclusion of unclassified items.

Sources: SARS, Stats SA and SARB

The real *imports* of goods and services declined slightly by 0.8% in the fourth quarter of 2022. Mining import volumes decreased further as the contraction in base metals and articles thereof outweighed the increase in mineral products and precious metals. The import volumes of agricultural products and services declined in the fourth quarter of 2022. Higher manufacturing import volumes in the fourth quarter of 2022 were supported by a significant increase in the importation of vehicles and transport equipment. By contrast, the import volumes of both chemical products as well as prepared foodstuffs, beverages and tobacco contracted further, while machinery and equipment reverted to a contraction in the fourth quarter.

Contributions of real exports and imports, and of net exports of goods and services, to growth in seasonally adjusted but not annualised real gross domestic product

Percentage points

| Component | 2022 | | | | | |
|---|---|---|---|---|---|---|
| | Exports | | Imports* | | Net exports | |
| | Q3 | Q4 | Q3 | Q4 | Q3 | Q4 |
| Total | 1.1 | -1.4 | 0.0 | -0.2 | 1.0 | -1.1 |
| Mining | 0.1 | -1.0 | -0.1 | 0.0 | 0.2 | -0.9 |
| *Of which:* | | | | | | |
| Mineral products | 0.4 | -0.6 | -0.1 | 0.0 | 0.5 | -0.6 |
| Precious metals, including gold, platinum group metals and stones | -0.6 | 0.2 | -0.1 | 0.1 | -0.5 | 0.1 |
| Base metals and articles thereof | 0.3 | -0.6 | 0.0 | -0.1 | 0.2 | -0.5 |
| Manufacturing | 0.4 | -0.6 | -0.3 | 0.3 | 0.7 | -0.9 |
| *Of which:* | | | | | | |
| Vehicles and transport equipment | -0.1 | 0.2 | -0.2 | 1.1 | 0.2 | -1.0 |
| Machinery and electrical equipment | 0.1 | -0.1 | 0.1 | -0.1 | 0.0 | 0.0 |
| Chemical products | -0.1 | -0.2 | -0.3 | -0.4 | 0.2 | 0.2 |
| Prepared foodstuffs, beverages and tobacco | 0.1 | -0.1 | 0.0 | 0.0 | 0.1 | -0.1 |
| Agriculture | 0.2 | 0.1 | 0.0 | -0.2 | 0.2 | 0.4 |
| *Of which:* | | | | | | |
| Vegetable products | 0.2 | 0.1 | -0.1 | 0.0 | 0.3 | 0.1 |
| Services | 0.2 | 0.1 | 0.4 | -0.3 | -0.2 | 0.4 |

* A positive contribution by imports *subtracts from* growth and a negative contribution *adds to* growth.
Components may not add up to totals due to rounding off and the exclusion of unclassified items.

Sources: SARS, Stats SA and SARB

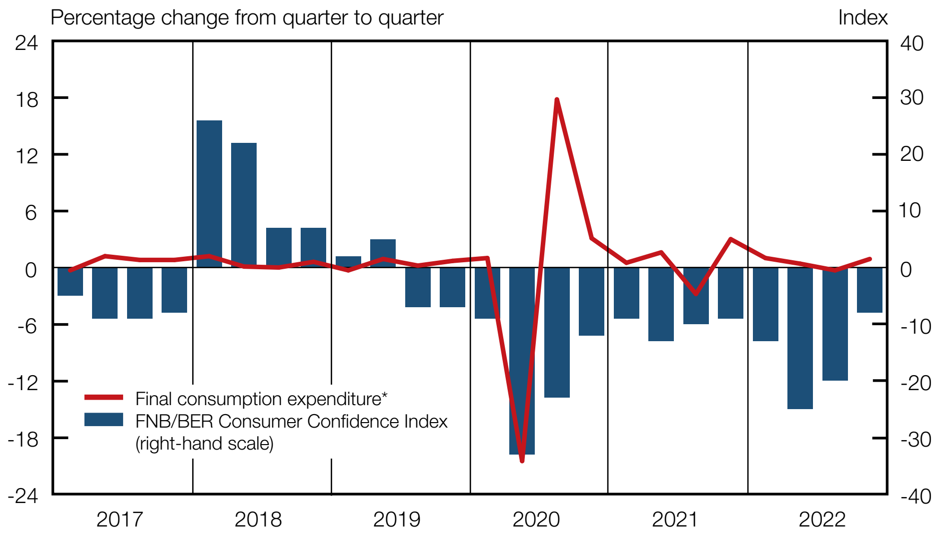
Lower real *net exports* subtracted 1.1 percentage points from real GDP growth in the fourth quarter of 2022 as net exports of mining and manufacturing products subtracted 0.9 percentage points each. The real net exports of mineral products as well as base metals and articles thereof subtracted the most from overall net mining exports, while the real net exports of vehicles and transport equipment subtracted the most from net manufacturing exports. Real net agricultural and services exports contributed 0.4 percentage points each to real GDP growth in the fourth quarter of 2022.

Real *final consumption expenditure by households* expanded by 0.9% in the fourth quarter of 2022 after contracting by 0.3% in the third quarter. The pace of increase in real spending on durable goods accelerated and real outlays on services increased in the fourth quarter of 2022 after decreasing in the third quarter, while that on semi-durable goods remained pedestrian and spending on non-durable goods contracted at a slower pace. The increase in household consumption expenditure was consistent with a rise in the real disposable income of households, higher credit extension to households and an improvement in the First National Bank (FNB)/Bureau for Economic Research (BER) Consumer Confidence Index in the fourth quarter of 2022.

The level of real consumer spending in 2022 was 2.6% higher than in 2021 and 2.0% higher than in 2019. Moreover, real final consumption expenditure rose by a seasonally adjusted and annualised average of 10.0% during the current upward phase of the business cycle (measured from the third quarter of 2020 to the fourth quarter of 2022). This compares with an average *contraction* of 19.0% during the preceding short downward phase (from the third quarter of 2019 to the second quarter of 2020).[7]

7 For a detailed discussion of recent business cycle developments, see the article titled 'The South African business cycle from 2013 to 2022' on page 107 in this edition of the *Quarterly Bulletin*.

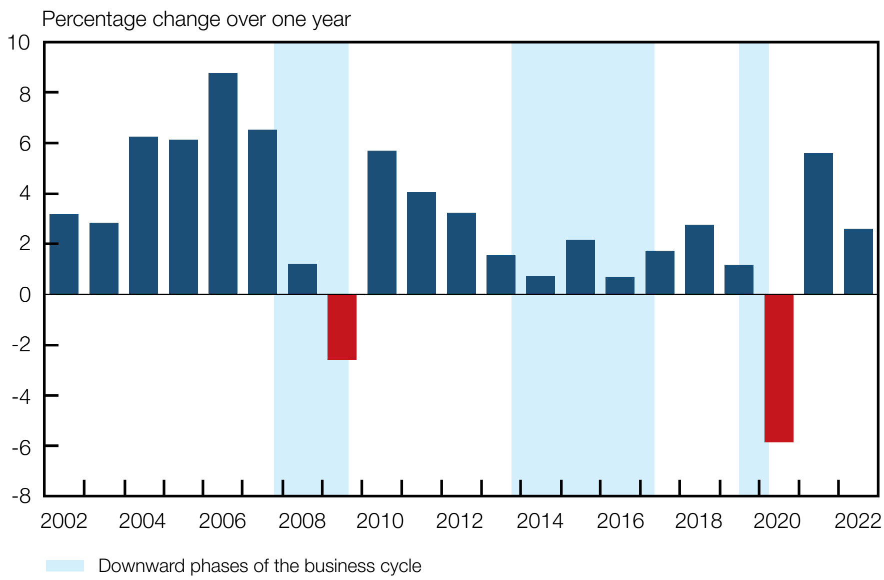
## Real final consumption expenditure by households and consumer confidence




* Seasonally adjusted

Sources: BER and Stats SA

## Real final consumption expenditure by households




Sources: Stats SA and SARB

Real consumer outlays on *durable goods* increased by 2.0% in the fourth quarter of 2022 compared with 1.4% in the third quarter. Real purchases of furniture and household appliances increased steadily, while spending on recreational and entertainment goods as well as computers and related equipment increased in the fourth quarter of 2022 following decreases in the third quarter. Growth in consumer spending on personal transport equipment also increased further, albeit at a slower pace. Real spending by households on durable goods increased by 0.3% in 2022, much less than the increase of 11.5% in 2021.

Real final consumption expenditure by households

Quarter-to-quarter percentage change at seasonally adjusted but not annualised rates

| Category | 2021 | | | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Year* | Q1 | Q2 | Q3 | Q4 | Year* |
| Durable goods............ | 7.0 | 2.4 | -10.2 | 2.2 | 11.5 | 3.2 | -1.0 | 1.4 | 2.0 | 0.3 |
| Semi-durable goods... | 1.9 | 0.4 | -5.0 | 5.3 | 8.8 | 0.9 | -0.9 | 0.1 | 0.1 | 1.7 |
| Non-durable goods .... | -0.1 | 1.1 | -3.8 | 5.2 | 4.4 | 1.4 | -1.2 | -1.1 | -0.2 | 2.1 |
| Services ..................... | -0.5 | 1.9 | -0.2 | 1.5 | 4.7 | 0.3 | 1.9 | -0.2 | 1.4 | 3.5 |
| **Total...........................** | **0.5** | **1.6** | **-2.8** | **3.0** | **5.6** | **1.0** | **0.4** | **-0.3** | **0.9** | **2.6** |

* Percentage change over one year

Source: Stats SA

Real spending by households on *semi-durable goods* increased by 0.1% in the fourth quarter of 2022 following a similar increase in the third quarter. Real expenditure on clothing and footwear switched from a decline in the third quarter of 2022 to an increase in the fourth quarter while spending on household textiles, furnishings and glassware increased further. However, real outlays on motorcar tyres, parts and accessories, which is the second-largest semi-durable goods component, decreased in the fourth quarter.

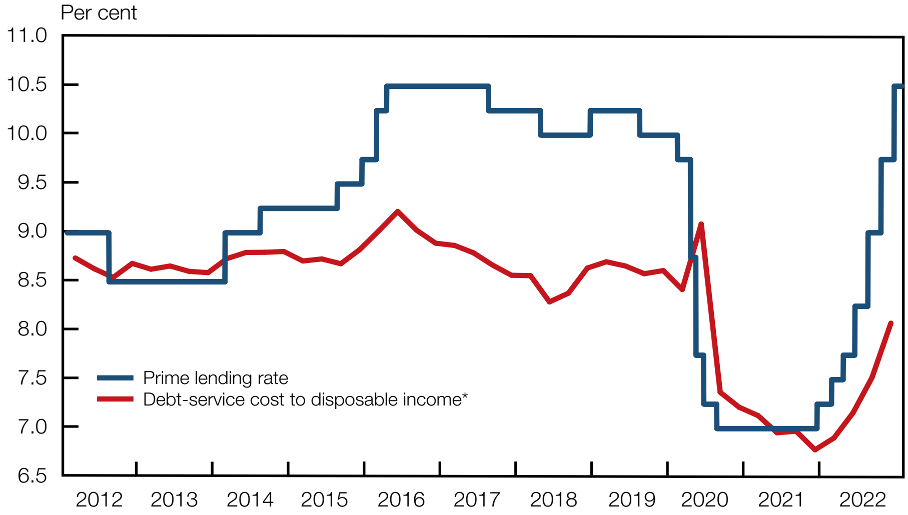
Following a contraction of 1.1% in the third quarter of 2022, real outlays on *non-durable goods* declined further, albeit at a slower pace of 0.2% in the fourth quarter. Real purchases of food, beverages and tobacco declined at a slower pace, while real outlays on medical and pharmaceutical products decreased in the fourth quarter of 2022 following an increase in the third quarter. Final consumption expenditure on household fuel, power and water increased at a slower pace in the fourth quarter. The increased real outlays on petroleum products reflected the higher number of passenger journeys in the fourth quarter.

Real consumption expenditure on *services* increased by 1.4% in the fourth quarter of 2022 following a decrease of 0.2% in the previous quarter. Real spending on medical services increased further in the fourth quarter while spending on household services, including domestic servants, and miscellaneous services also increased following a decrease in the third quarter. Consumer spending on transport and communication services switched to a contraction in the fourth quarter while recreational, entertainment and educational services contracted further.

Seasonally adjusted nominal *household debt* increased in the fourth quarter of 2022 as most categories of credit extended to households increased. The increase in nominal disposable income exceeded the increase in household debt, resulting in a slight decrease in the ratio of household debt to nominal disposable income to 62.3% in the fourth quarter of 2022 from 62.5% in the third quarter. Households' cost of servicing debt relative to nominal disposable income increased from 7.5% in the third quarter of 2022 to 8.1% in the fourth quarter, reflecting a combination of higher debt and interest rates.

Growth in household debt moderated from 6.8% in 2021 to 6.0% in 2022. Household debt as a percentage of nominal disposable income decreased from 64.3% to 62.6% over the same period as the annual increase in households' nominal disposable income exceeded the increase in their debt. However, households' cost of servicing debt relative to nominal disposable income increased from 6.9% in 2021 to 7.4% in 2022, reflecting the combination of higher debt and the cumulative 325 basis points increase in the prime lending rate in 2022.

Household debt-service cost and the prime lending rate



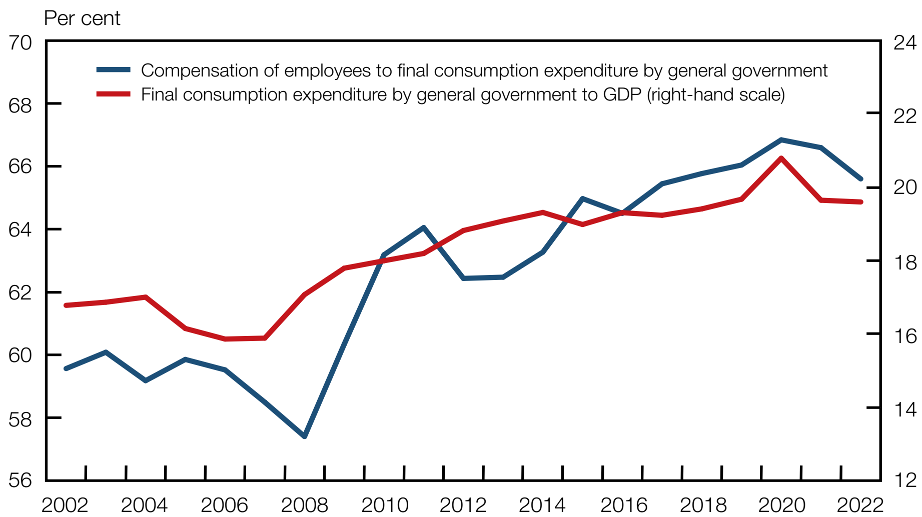

* Seasonally adjusted

Source: SARB

*Households' net wealth* increased in the fourth quarter of 2022 as the increase in the market value of total assets outweighed that in total liabilities. The higher value of assets resulted from an increase in share prices and an increase in housing stock. Consequently, the ratio of net wealth to nominal disposable income rose to 356% in the fourth quarter of 2022 from 344% in the previous quarter. Households' net wealth increased at a slower pace in 2022 as liabilities increased and assets decreased. The lower value of assets mainly resulted from a decrease in equity holdings as share prices declined marginally in 2022. Accordingly, the ratio of net wealth to disposable income decreased to 356% in 2022 from 376% in 2021.

Real *final consumption expenditure by general government* decreased at 0.7% in the fourth quarter of 2022 following an increase of 0.6% in the third quarter, as real spending on both compensation of employees as well as non-wage goods and services declined. Growth in real final consumption expenditure by general government accelerated slightly to 0.9% in 2022 from 0.6% in 2021 as the increase in real spending on non-wage goods and services exceeded that on the real compensation of employees. The nominal compensation of employees – the largest component of government spending – as a ratio of total final consumption expenditure by general government decreased slightly from 66.6% in 2021 to 65.6% in 2022, keeping the ratio of nominal final consumption expenditure by general government to nominal GDP unchanged at 19.6% in both 2021 and 2022.

Nominal final consumption expenditure by general government




Source: Stats SA

Real *gross fixed capital formation* increased further by 1.3% in the fourth quarter of 2022 following an increase of 0.3% in the third quarter, mainly supported by increased capital spending by private business enterprises and general government. By contrast, capital outlays by public corporations decreased in the fourth quarter.

### Real gross fixed capital formation

Quarter-to-quarter percentage change at seasonally adjusted but not annualised rates

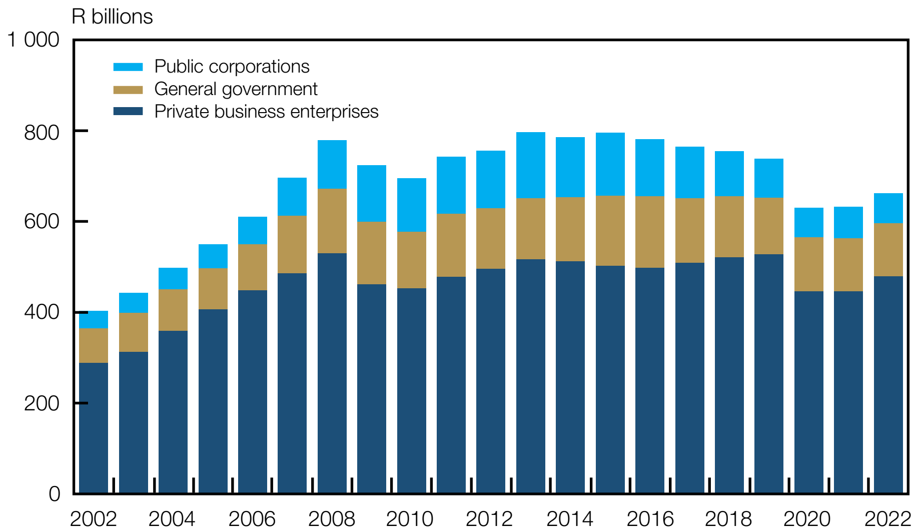
| Sector | 2021 | | | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Year* | Q1 | Q2 | Q3 | Q4 | Year* |
| Private business enterprises ... | -4.5 | 0.6 | -0.3 | 2.8 | 0.1 | 4.4 | 0.7 | -0.6 | 1.5 | 7.3 |
| Public corporations................ | 4.6 | 1.3 | 0.0 | 0.1 | 5.6 | -2.7 | -1.5 | 0.6 | -2.3 | -3.6 |
| General government............. | -2.2 | -4.3 | -4.9 | -2.6 | -2.5 | 3.5 | -0.1 | 3.5 | 2.5 | 0.0 |
| Total..................................... | -3.1 | -0.3 | -1.1 | 1.6 | 0.2 | 3.5 | 0.3 | 0.3 | 1.3 | 4.7 |

* Percentage change over one year

Source: Stats SA

Real capital expenditure increased marginally by 0.2% in 2021 and further by 4.7% in 2022 after contracting for five consecutive years. The increase in 2022 was supported by investment in computer software, machinery and other equipment as well as transport equipment, mainly by private business enterprises and public corporations. However, the level of real gross fixed capital formation in 2022 was still a sizeable 10.4% lower than in 2019. The ratio of nominal gross fixed capital formation to nominal GDP increased from 13.1% in 2021 to 14.1% in 2022.

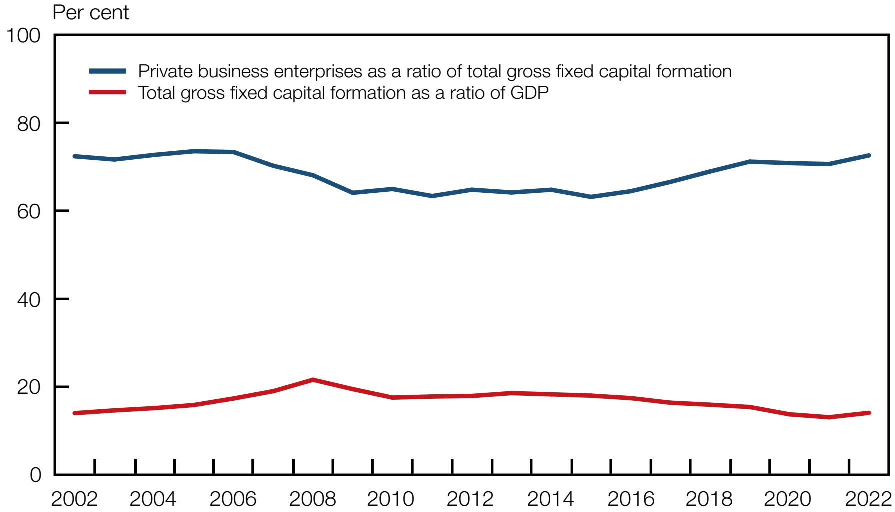
### Real gross fixed capital formation by sector




Source: Stats SA

Real gross fixed capital outlays by *private business enterprises* increased by 1.5% in the fourth quarter of 2022, contributing 1.1 percentage points to growth in total gross fixed capital formation. Increased investment in research and development as well as in residential buildings more than offset the lower capital outlays on computer equipment and construction works in the fourth quarter. On an annual basis, real capital spending by private business enterprises increased by a significant 7.3% in 2022 following an increase of only 0.1% in 2021. However, the level of real gross fixed capital investment by private business enterprises in 2022 was still 9.1% lower than in 2019. The private sector's share of total nominal gross fixed capital formation nevertheless increased from 70.6% in 2021 to 72.6% in 2022.

Nominal gross fixed capital formation




Source: Stats SA

Growth in real capital spending by the *public sector* slowed to 0.8% in the fourth quarter of 2022 following a significant increase of 2.4% in the third quarter. Real gross fixed capital formation by *public corporations* decreased by 2.3% in the fourth quarter of 2022 following an increase of 0.6% in the third quarter. Capital expenditure on machinery and equipment as well as on residential buildings decreased in the fourth quarter. Real capital outlays by public corporations decreased by 3.6% in 2022 following an increase of 5.6% in 2021. Capital investment by the public sector decreased by 1.3% in 2022. Similarly, its share of total nominal gross fixed capital formation decreased to 27.4% from 29.4% in 2021.

The pace of increase in real gross fixed capital formation by *general government* slowed to 2.5% in the fourth quarter of 2022 from 3.5% in the third quarter as capital expenditure on research and development and on non-residential buildings decreased. Real capital outlays by general government remained unchanged in 2022 after decreasing for five successive years. Consequently, the level of real capital investment by general government was 6.9% lower in 2022 than in 2019.

Measured by type of asset, real gross fixed capital outlays on transport equipment and on machinery and other equipment increased in the fourth quarter of 2022, contributing 1.4 and 0.8 percentage points respectively to growth in total real gross fixed capital formation. Real capital investment in computer software, machinery and other equipment as well as in transport equipment increased in 2022.

Measured at seasonally adjusted and annualised 2015 prices, real *inventory holdings* increased by a further R29.4 billion in the fourth quarter of 2022 after an accumulation of R69.5 billion in the third quarter, subtracting 0.9 percentage points from total GDP growth. The accumulation of inventory holdings in the mining, manufacturing and trade sectors was partly offset by the de-accumulation of inventories in the agricultural and electricity sectors in the fourth quarter. In 2022, inventories expanded by R36.0 billion after a contraction of R20.6 billion in 2021.

## Gross nominal saving

The *national saving rate* (gross saving as a percentage of nominal GDP) for South Africa declined to 13.0% in the fourth quarter of 2022 from 15.9% in the third quarter, led by lower saving by corporate business enterprises and households as well as continued dissaving by general government. Consequently, the share of total gross capital formation financed through foreign capital (the foreign financing ratio) increased sharply to 16.7% in the fourth quarter of 2022. Despite fluctuating between a high of 16.4% in the first quarter of 2022 and a low of 13.0% in the fourth quarter, the annual national saving rate declined to 14.6% in 2022 from 16.5% in 2021.

Gross saving as a percentage of gross domestic product

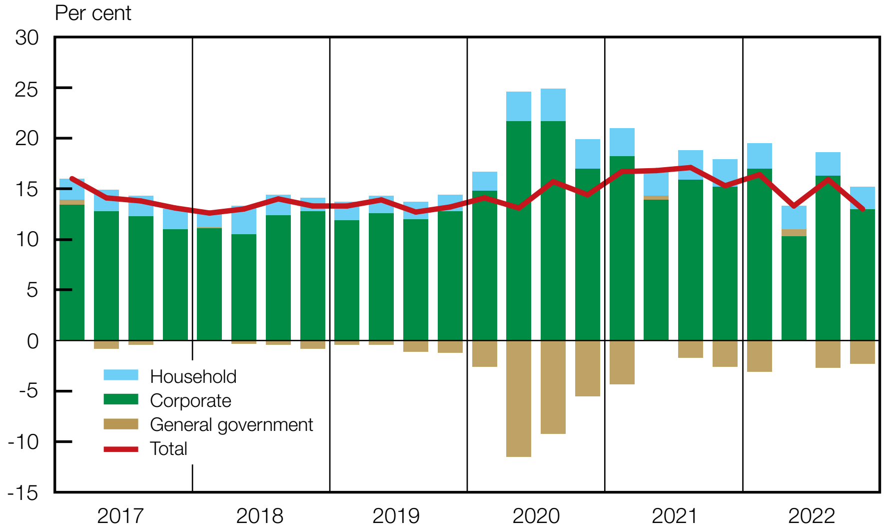
Ratio in per cent based on seasonally adjusted and annualised data

| Sector | 2021 | | | | | 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Year | Q1 | Q2 | Q3 | Q4 | Year |
| Corporate | 18.2 | 13.9 | 15.9 | 15.2 | 15.8 | 17.0 | 10.3 | 16.3 | 13.0 | 14.1 |
| General government | -4.3 | 0.4 | -1.7 | -2.6 | -2.1 | -3.1 | 0.7 | -2.7 | -2.3 | -1.9 |
| Household | 2.8 | 2.6 | 2.9 | 2.7 | 2.8 | 2.5 | 2.3 | 2.3 | 2.2 | 2.4 |
| Total | 16.7 | 16.8 | 17.1 | 15.3 | 16.5 | 16.4 | 13.3 | 15.9 | 13.0 | 14.6 |

Source: SARB

Gross saving by the *corporate sector* as a percentage of nominal GDP decreased from 16.3% in the third quarter of 2022 to 13.0% in the fourth quarter as a net result of the subdued seasonally adjusted operating surplus and higher seasonally adjusted tax payments. For 2022 as a whole, the corporate saving rate decreased to 14.1% from 15.8% in 2021, mainly due to higher dividend payments. Dissaving by *general government* as a percentage of nominal GDP decreased to 2.3% in the fourth quarter of 2022 from 2.7% in the third quarter as the seasonally adjusted government expenditure decreased and revenue collections increased over the period. The dissaving rate of general government decreased from 2.1% in 2021 to 1.9% in 2022. Gross saving by the *household sector* as a ratio of GDP declined to 2.2% in the fourth quarter of 2022 from 2.3% in the third quarter, as the increase in seasonally adjusted nominal consumption expenditure outweighed that in seasonally adjusted disposable income. Similarly, the annual saving rate of households declined from 2.8% in 2021 to 2.4% in 2022.

Nominal gross saving as a ratio of gross domestic product



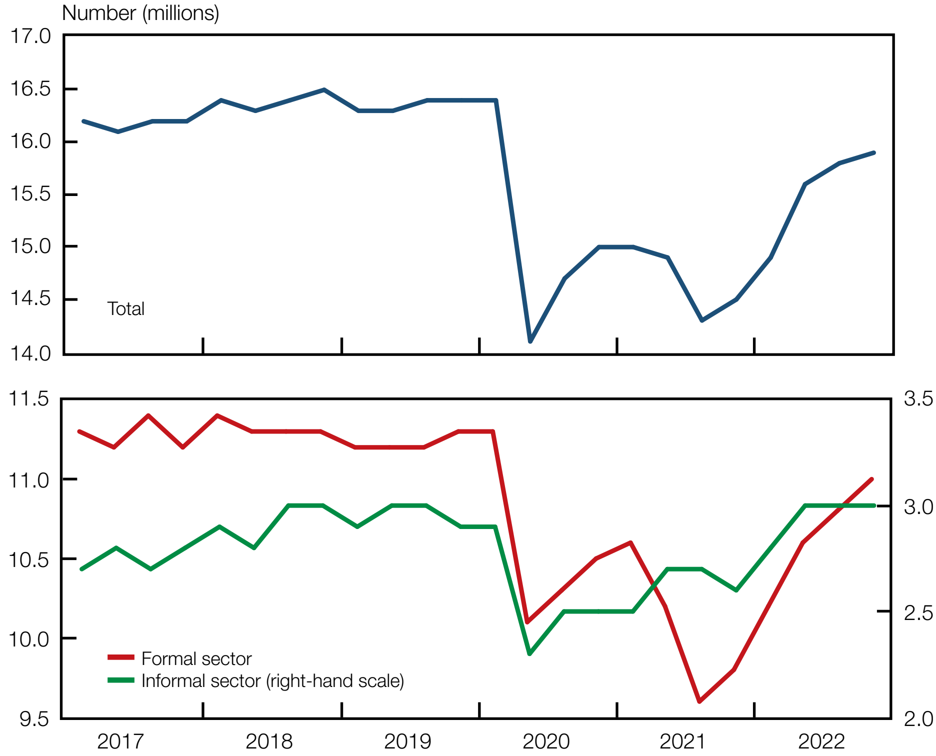

Sources: Stats SA and SARB

## Employment

Total household-surveyed employment increased further by 169 000 (1.1%) in the fourth quarter of 2022, according to the *Quarterly Labour Force Survey* (*QLFS*) of Statistics South Africa (Stats SA). This was underpinned by an increase of 143 000 jobs (1.3%) in the formal sector and 55 000 jobs (5.0%) in the private household sector. However, the informal sector and the agricultural sector shed 16 000 (0.5%) and 12 000 (1.4%) jobs respectively in the fourth quarter of 2022.

Total employment increased sharply by about 1.39 million (9.6%) in 2022 following the opening of the economy after the COVID-19 restrictions and also partly reflecting improvements in the response rate of the *QLFS.* However, employment prospects in 2023 could be supressed by an expected slowdown in domestic economic growth within an environment of higher inflation and interest rates, persistent electricity load-shedding and supply chain disruptions compounded by geopolitical tensions. The number of new and renewed job postings on the PNet web platform decreased by 0.6% in the fourth quarter of 2022, possibly indicating a slowdown in employment growth.

Household-surveyed employment




Source: Stats SA

The International Labour Organization (ILO) expects growth in global employment to decelerate to 1.0% in 2023 following an increase of 2.3% in 2022.[8] The global employment outlook remains pessimistic for high-income countries, while low-income and lower-middle-income countries are expected to see employment growth in excess of that which prevailed before the COVID-19 pandemic.

Encouragingly, employment contracts of a permanent duration and those of limited duration increased by 13.4% and 12.6% respectively in the year to the fourth quarter of 2022, whereas employment contracts of unspecified duration increased by only 4.4%. The sharp increase in employment contracts of a limited duration could in part be related to temporary public sector jobs under the Expanded Public Works Programme as well as youth training and employment opportunities under the Presidential Youth Employment Initiative.

8 International Labour Organization, *World Employment and Social Outlook: Trends 2023*. Available at https://www.ilo.org/global/research/global-reports/weso/WCMS_865332/lang--en/index.htm

Household-surveyed labour market statistics

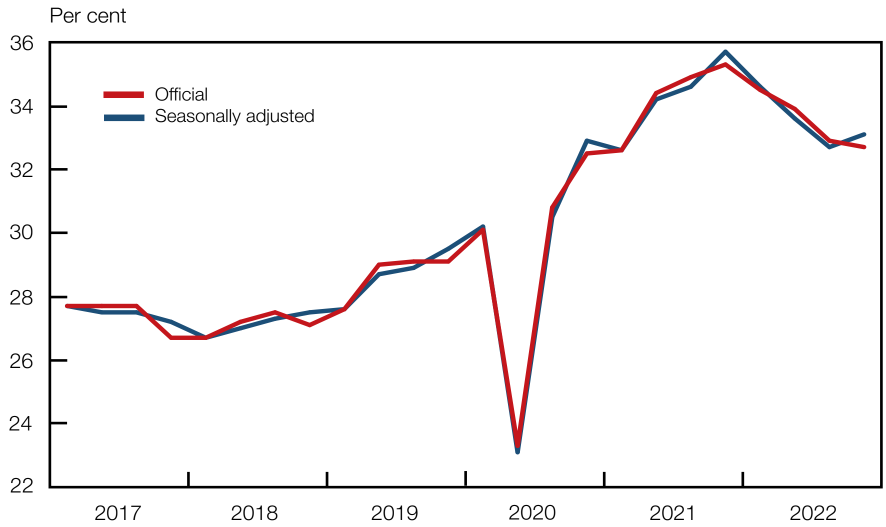
| | Number (thousands) | | | | Quarter-to-quarter change | | Percentage change over four quarters |
|---|---|---|---|---|---|---|---|
| | 2021 | 2022 | | | 2022 Q4 | | |
| | Q4 | Q2 | Q3 | Q4 | Number | Per cent | Per cent |
| a. Total employed | 14 544 | 15 562 | 15 765 | 15 934 | 169 | 1.1 | 9.6 |
| b. Total unemployed (official definition) | 7 921 | 7 994 | 7 725 | 7 753 | 28 | 0.4 | -2.1 |
| c. Total labour force (a+b) | 22 466 | 23 556 | 23 490 | 23 688 | 198 | 0.8 | 5.4 |
| d. Total not economically active | 17 423 | 16 621 | 16 831 | 16 774 | -57 | -0.3 | -3.7 |
| e. Population 15–64 years (c+d) | 39 888 | 40 177 | 40 322 | 40 462 | 140 | 0.3 | 1.4 |
| f. Official unemployment rate* (b/c)*100 | 35.3% | 33.9% | 32.9% | 32.7% | – | – | – |
| g. Discouraged | 3 806 | 3 568 | 3 514 | 3 363 | -151 | -4.3 | -11.6 |
| h. Other reasons for not searching for work | 956 | 1 146 | 1 157 | 1 136 | -21 | -1.8 | 18.8 |
| i. Expanded unemployment rate** | 46.3% | 44.1% | 43.1% | 42.6% | – | – | – |

* Stats SA follows the ILO definition of calculating the official unemployment rate, which is internationally comparable.
** The expanded unemployment rate is calculated by Stats SA's in-house formula and is not internationally comparable.

Source: Stats SA

The number of unemployed South Africans increased by 28 000 (0.4%) to 7.75 million in the fourth quarter of 2022 and, together with the increase in total employment of 169 000, elevated the total labour force to 23.7 million. With employment increasing more than unemployment, the official unemployment rate decreased further from 32.9% in the third quarter of 2022 to 32.7% in the fourth quarter. By contrast, the seasonally adjusted unemployment rate increased from 32.9% to 33.1% over the same period. In the fourth quarter of 2022, most unemployed persons were new entrants to the labour market (45.5%) followed by job losers (26.4%), while those who had last worked five or more years ago represented 22.5% of the officially unemployed. Re-entrants and job leavers accounted for only 3.0% and 2.6% respectively of the total number of unemployed persons in the fourth quarter. Long-term unemployment (being unemployed for one year or longer) has been increasing steadily over the past decade, from 68.2% in the fourth quarter of 2012 to 78.3% in the fourth quarter of 2022.

Unemployment rate

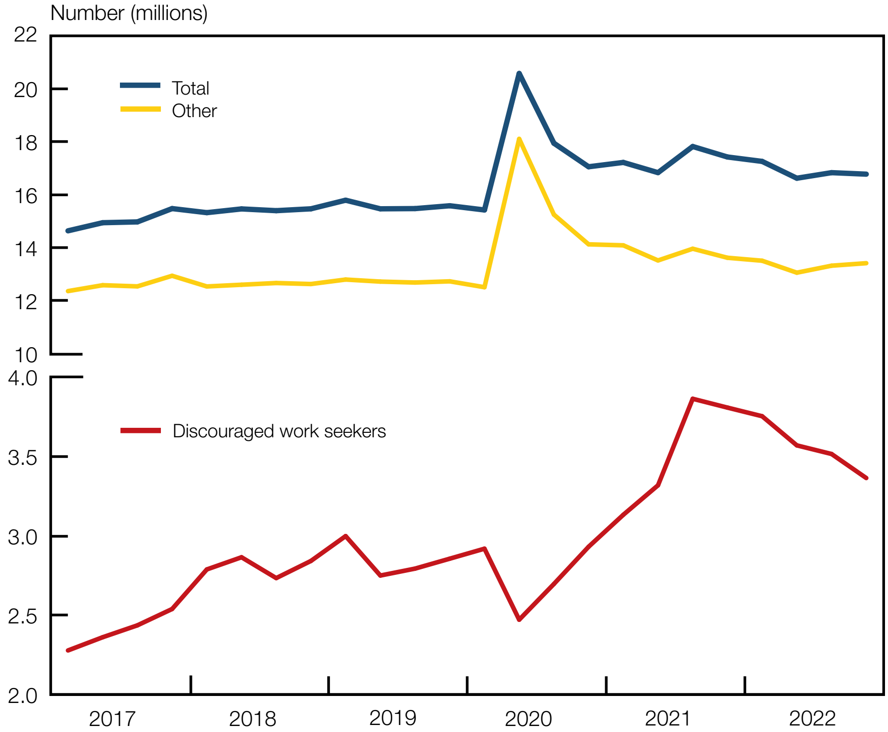



Sources: Stats SA and SARB

The youth unemployment rate (those aged 15–24 years and actively searching for work) increased from 59.6% in the third quarter of 2022 to 61.0% in the fourth quarter. Moreover, approximately 3.4 million of these 10.2 million young people, or 33.6%, were not in employment, education programmes or training (NEET) in the fourth quarter of 2022. By contrast, the unemployment rate of those aged between 25 and 35 years decreased further from 40.5% in the third quarter to 39.9% in the fourth quarter. The ILO has indicated that, globally, more than one in five young people (aged between 15 and 24 years), or about 289 million, were classified as NEET in 2022.[9]

9 International Labour Organization, *World Employment and Social Outlook: Trends 2023.* Available at https://www.ilo.org/global/research/global-reports/weso/WCMS_865332/lang--en/index.htm

Not economically active population




Source: Stats SA

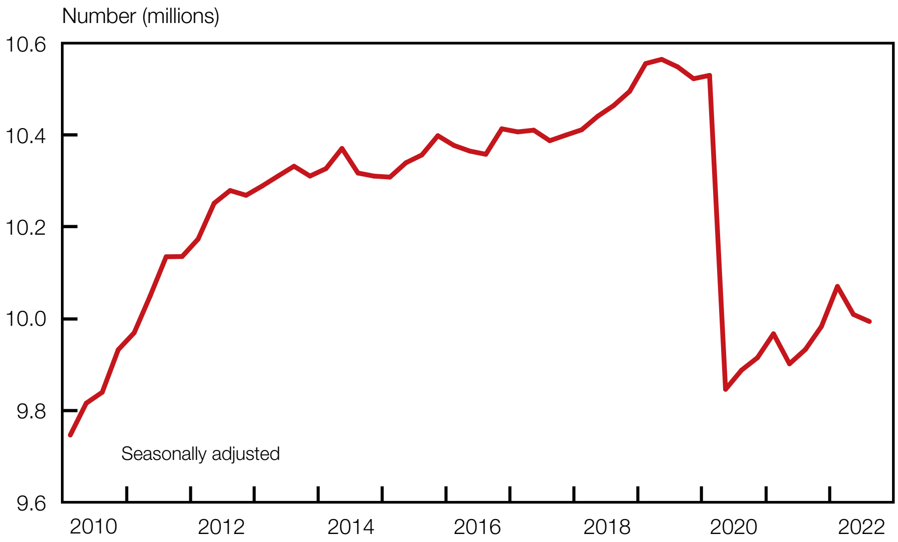
A large number of people moved from the not economically active category, mainly from the discouraged subcategory, into the labour force during the fourth quarter of 2022. As such, the not economically active population decreased by 57 000 (0.3%) in the fourth quarter of 2022, with the number of discouraged work seekers decreasing by 151 000 (4.3%), while the other[10] not economically active category increased by 95 000 (0.7%). The expanded unemployment rate, which includes discouraged work seekers, thus decreased further from 43.1% in the third quarter of 2022 to 42.6% in the fourth quarter.

*Enterprise-surveyed formal non-agricultural employment*[11] decreased for a second successive quarter in the third quarter of 2022, albeit at a slower annualised pace of 0.6%, with around 15 000 jobs lost, lowering the level of such employment to an estimated 10 million persons. This reflected a further reduction in public sector employment, which more than offset the faster pace of increase in private sector employment. Job creation could be constrained by the increased frequency and intensity of electricity load-shedding and the concomitant increase in cost pressures over the medium term.

10 The *other* category includes students, home-makers, those too old or young too work, as well as those who are ill or disabled. Stats SA also captured people who could not search for work due to the pandemic and lockdown restrictions since the second quarter of 2020 as well as those who did not search for work due to the civil unrest in the third quarter of 2021 in this category.

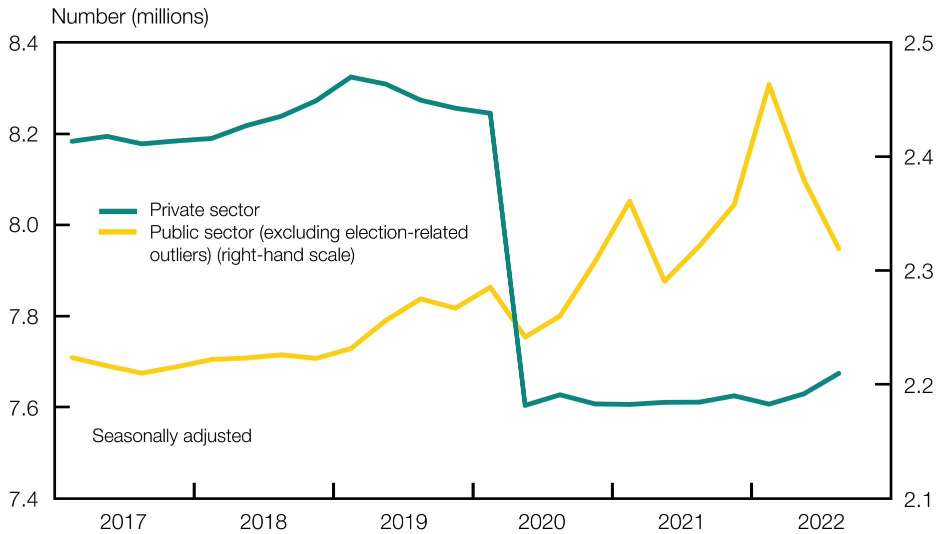
11 As measured by Stats *SA's Quarterly Employment Statistics (QES)* survey. The statistics analysed in this section were seasonally adjusted by the SARB.

Formal non-agricultural employment




Sources: Stats SA and SARB

Public and private sector employment

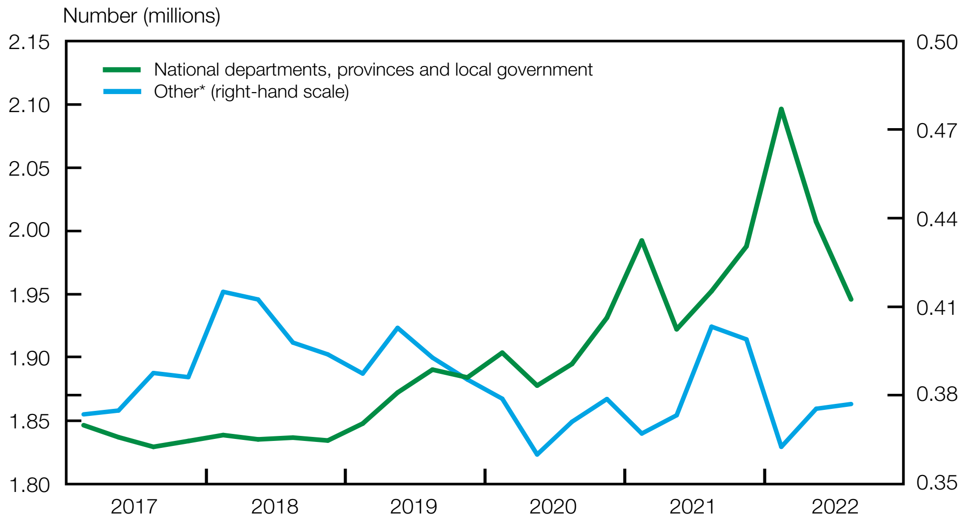



Sources: Stats SA and SARB

*Public sector employment* decreased notably further by 59 700 in the third quarter of 2022. The decrease in headcount could largely be attributed to the termination of the employment contracts of workers employed under Phase III of the Presidential Youth Employment Initiative at the end of August 2022, which reduced employment at provincial level by around 62 100 jobs. In addition, job losses were registered in the public sector's transport, storage and communication services in the third quarter. By contrast, marginal job gains were recorded at national and local government level.

*Private sector employment* increased at an accelerated pace in the third quarter of 2022, adding 44 700 jobs in six of the eight subsectors. The services subsectors collectively gained about 40 400 jobs, led by the finance, insurance, real estate and business services sector. Employment in the goods-producing sectors increased by a mere 4 300, as job gains in the non-gold-mining and construction sectors were offset by job losses in the manufacturing and gold-mining sectors.

Public sector employment



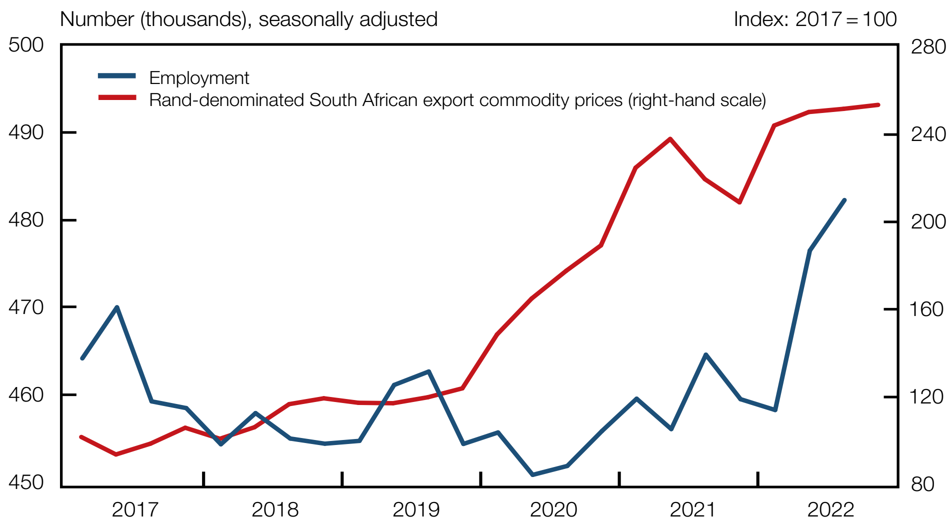

*Electricity, transport and other government institutions

Seasonally adjusted

Sources: Stats SA and SARB

*Mining sector employment* increased further in the third quarter of 2022, albeit at a slower pace than in the second quarter, with job gains in the non-gold-mining sector partly offset by job losses in the gold-mining sector. The mining sector has benefitted greatly from the surge in South African export commodity prices since 2020, but could come under pressure from domestic economic constraints and the recent decline in these prices as global economic growth slows.

Mining sector employment and commodity prices




Sources: Stats SA and SARB

*Manufacturing sector employment* decreased slightly in the third quarter of 2022 following job gains in the previous three quarters. On balance, manufacturing employment remained below the second quarter of 2020's COVID-19 low for an eighth consecutive quarter, consistent with the uneven recovery in manufacturing output over this period. In addition, business confidence among manufacturers[12] remained unchanged at a low of 26 index points in the fourth quarter of 2022, as manufacturers had to contend with intense electricity load-shedding, logistical constraints and water-shedding in some parts of the country as well as continued input cost pressures. Employment prospects in the manufacturing sector remain uncertain given the tough trading environment and weak confidence levels.

12 As measured by the BER's *Absa Manufacturing Survey*.

13 As measured by the FNB/BER Building Confidence Index.

*Construction sector employment* increased by a mere 1 200 in the third quarter of 2022 following the combined loss of around 33 600 jobs in the preceding three quarters, within an overall downward trend over the past five years. Despite these employment outcomes, the FNB/BER Civil Confidence Index rose by a further 7 index points to a five-year high of 31 in the fourth quarter of 2022, underpinned by an increase in construction activity that supported profitability. Civil contractors were upbeat about the long-awaited renewable energy investment projects but remained concerned that more tenders were being advertised than awarded as well as the destructive effects of criminality in the sector. Conversely, building sector confidence[13] fell by one index point to 33 in the fourth quarter of 2022 as three of the six building subsectors registered lower confidence, led by hardware retailers. Overall, the survey results indicated that building activity has improved somewhat but that the continued weakness in non-residential building activity could undo some of the gains made in the residential building sector.

14 As measured by the BER's *Retail Survey.*

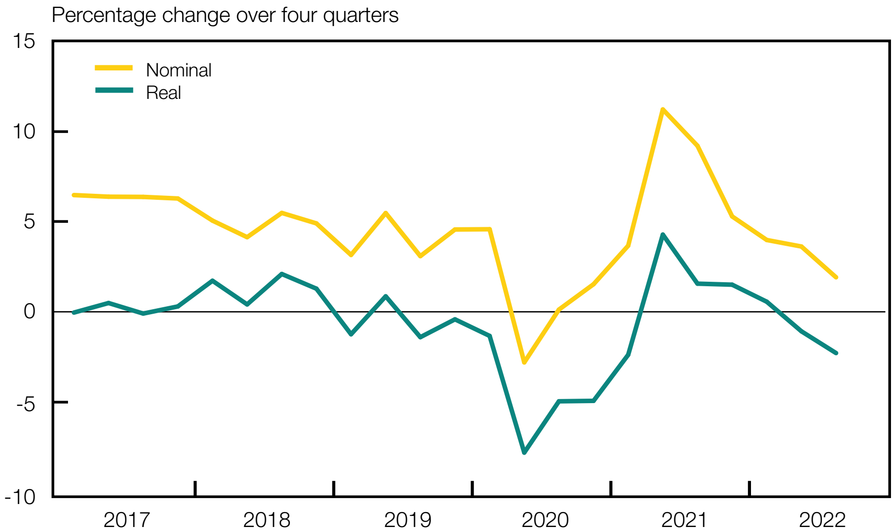
*Employment in the trade, catering and accommodation services sector* increased slightly further in the third quarter of 2022, with a cumulative gain of about 58 500 jobs in the year to the third quarter. Discouragingly, retailer confidence[14] fell from 51 to 42 index points in the fourth quarter of 2022 following some resilience since the second quarter of 2021. Real retail trade sales contracted in the second and third quarter of 2022 as higher interest rates reduced nominal household disposable income while high consumer price inflation further eroded it in real terms. Retailers were also faced with extensive electricity load-shedding and continued cost pressures.

By contrast, the *finance, insurance, real estate and business services sector* added 34 000 jobs in the third quarter of 2022, more than reversing the losses of the preceding three quarters. Encouragingly, the level of employment in this sector has now risen slightly above the pandemic-induced low in the second quarter of 2020. Despite increasing for a second successive quarter in the third quarter of 2022, *employment in the transport, storage and communication services sector* remained at 2004 levels.

## Labour cost and productivity

The year-on-year pace of increase in *formal non-agricultural nominal remuneration per worker* moderated further for a fifth successive quarter, from 3.6% in the second quarter of 2022 to 1.9% in the third quarter. Nominal remuneration growth per worker in the private sector slowed over this period, while that in the public sector contracted at a faster pace. In real terms, nominal wages per worker decreased at a faster pace of 2.3% in the third quarter of 2022 compared with 1.1% in the second quarter.

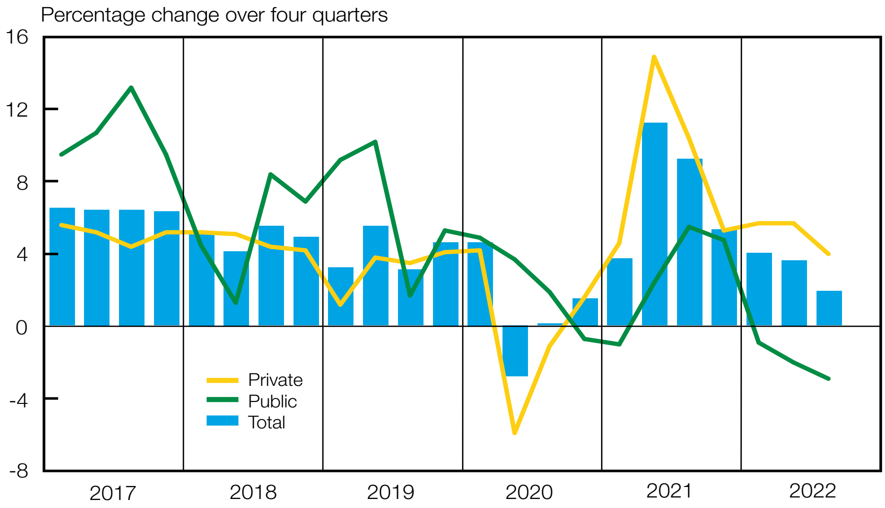
Formal non-agricultural remuneration per worker




Sources: Stats SA and SARB

After remaining unchanged at 5.7% in the second quarter of 2022, growth in *nominal remuneration per private sector worker* moderated to 4.0% in the third quarter. In the construction sector, growth in nominal remuneration per worker slowed sharply as total remuneration contracted alongside a decrease in employment. Growth in nominal remuneration per worker also slowed in the following sectors: non-gold mining; finance, insurance, real estate and business services; community, social and personal services; and transport, storage and communication services.

Formal non-agricultural nominal remuneration per worker



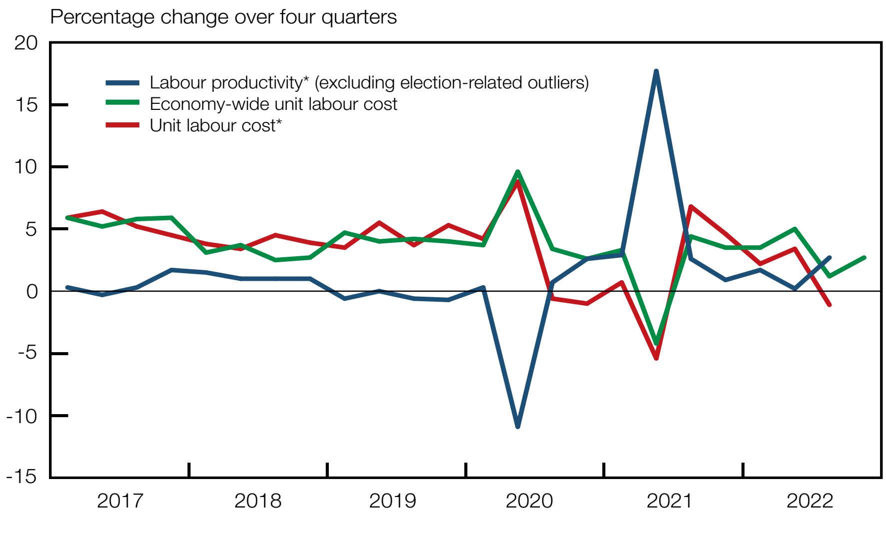

Sources: Stats SA and SARB

The rate of decrease in *nominal remuneration per public sector worker* accelerated further from 2.1% in the second quarter of 2022 to 2.9% in the third quarter, and reflected a broad-based decrease in remuneration per worker at all tiers of government, except in the 'Other public sector enterprises' category.[15] This continued to largely reflect the delayed implementation of the 2022 public sector wage increase, together with the large number of low-earning youth employed under the Presidential Youth Employment Initiative.

15 This category includes parastatals, agricultural marketing boards, tertiary education institutions and public corporations (excluding the SABC, the South African Post Office, Telkom and Transnet).

The *average wage settlement rate in collective bargaining agreements* rose notably to 6.0% in 2022 from 4.4% in 2021, according to Andrew Levy Employment Publications. This likely reflected the acceleration in consumer price inflation in 2022. Similarly, the *number of working days lost due to industrial action* increased sharply to 2.4 million in 2022 from 1.7 million in 2021, reflective of higher wage demands amid the acceleration in consumer price inflation.

Labour productivity and nominal unit labour cost




* Formal non-agricultural sector

Sources: Stats SA and SARB

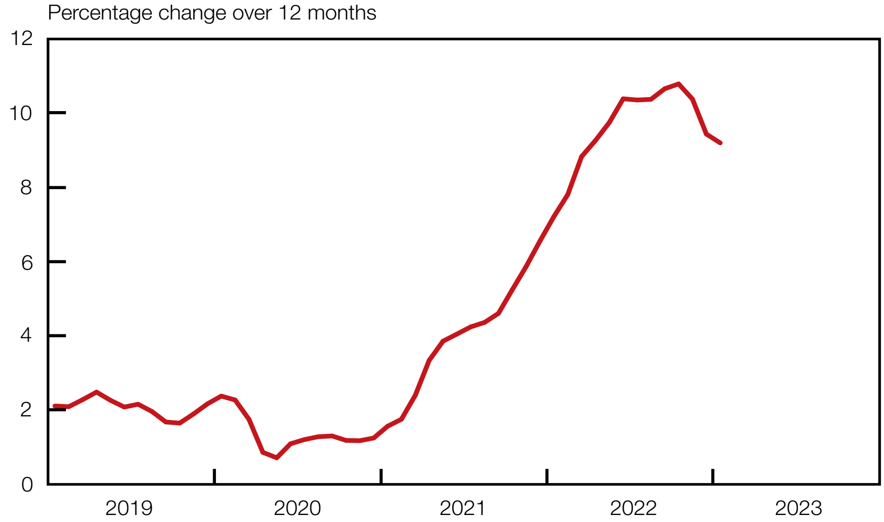
*Labour productivity growth* in the formal non-agricultural sector of the economy accelerated markedly from 0.2% in the second quarter of 2022 to 2.7% in the third quarter, as year-on-year output growth accelerated while employment growth slowed. By contrast, the change in *nominal unit labour cost* in the formal non-agricultural sector reverted from an increase of 3.4% in the second quarter of 2022 to a decrease of 1.1% in the third quarter, as year-on-year growth in total remuneration slowed while that in output accelerated. In addition, growth in economy-wide nominal unit labour cost quickened from 1.2% in the third quarter of 2022 to 2.7% in the fourth quarter, as year-on-year output growth moderated more than that in the compensation of employees.

## Prices[16]

16 Unless stated to the contrary, all the rates mentioned in this section reflect year-on-year changes.

Domestic headline producer and consumer price inflation decelerated somewhat in recent months alongside a moderation in global inflationary pressures. Disinflation in both measures of domestic inflation since July 2022 has mainly reflected decreases in domestic fuel prices due to lower international crude oil prices and the statistical effect of a high base in the preceding year.

Global consumer prices




Source: OECD

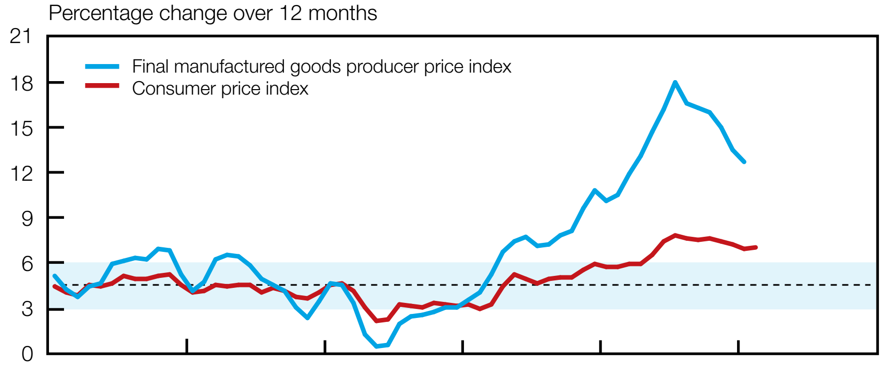
Headline consumer price inflation moderated to 6.9% in January 2023 from a recent high of 7.8% in July 2022, while headline producer price inflation moderated from 18.0% to 12.7% over the same period. Headline consumer price inflation then accelerated slightly to 7.0% in February 2023. On an annual average basis, headline consumer price inflation accelerated from 4.5% in 2021 to 6.9% in 2022, while headline producer price inflation more than doubled from 7.1% in 2021 to 14.4% in 2022.

The recent deceleration in producer price inflation of final manufactured goods reflected lower rates of increase in several price categories, although these were largely driven by coal and petroleum products. However, producer price inflation remained high in several categories, such as food, petroleum and coal, paper and printing, rubber and chemical products as well as metals and machinery products. Producer price inflation for intermediate manufactured goods slowed from a peak of 23.1% in December 2021 to 5.6% in January 2023, partly influenced by the gradual normalisation of global supply chains as evidenced by the easing of raw material shortages in addition to the effects of a high statistical base. This is also evident in the moderation of producer price inflation in the largest category of basic and fabricated metals as well as chemical, rubber and plastic products.

Producer price inflation of agriculture, forestry and fishing products averaged 14.6% in 2022 but was volatile during the year as it fluctuated between 6.9% and 18.9% due to global supply chain disruptions and higher input costs following the war in Ukraine. Producer price inflation of mining products moderated slightly from 30.1% in September 2022 to a still high 19.9% in January 2023, with the prices of coal and gas remaining elevated. Producer prices of electricity and water switched from a year-on-year decrease of 1.0% in September 2022 to an increase of 9.8% in January 2023 as electricity price inflation added 8.9 percentage points. In 2022, producer price inflation for electricity was impacted by changes in volumes consumed due to load-shedding.

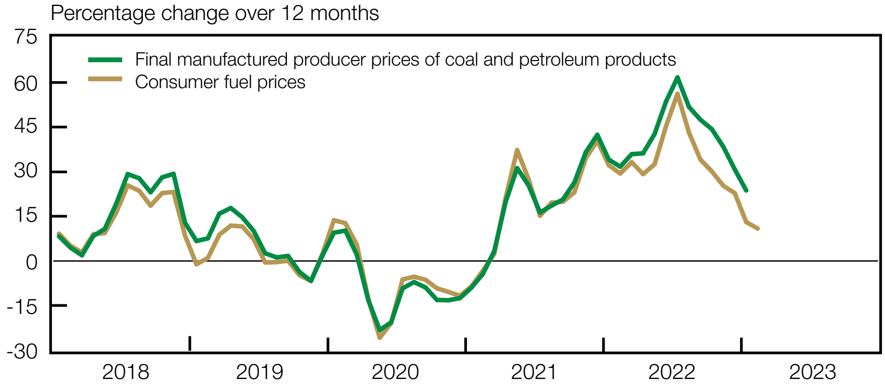
### Headline producer and consumer prices

Percentage change over 12 months




### Producer and consumer fuel prices

Percentage change over 12 months




---- Midpoint of the inflation target range (4.5%)

Source: Stats SA

### Producer price inflation

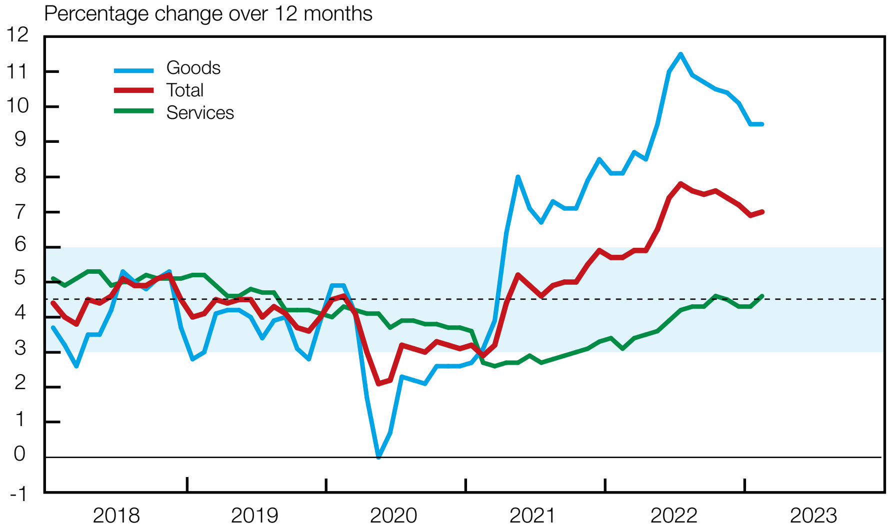
Annual average percentage change

| | 2019 | 2020 | 2021 | 2022 | Jan 2023 |
|---|---|---|---|---|---|
| Final manufactured goods | 4.6 | 2.6 | 7.1 | 14.4 | 12.7 |
| Intermediate manufactured goods | 2.6 | 2.5 | 16.2 | 14.6 | 5.6 |
| Electricity and water | 11.4 | 10.3 | 12.9 | 10.3 | 9.8 |
| Mining | 17.4 | 32.5 | 12.0 | 18.0 | 19.9 |
| Agriculture, forestry and fishing | -1.8 | 4.7 | 9.3 | 14.6 | 11.7 |

Source: Stats SA

Headline consumer price inflation has now been above the midpoint of the inflation target range of 4.5% for 22 consecutive months up to February 2023 and above the 6.0% upper limit of the inflation target range for 10 consecutive months. The recent gradual disinflation in consumer prices reflected a deceleration in consumer goods price inflation (mostly on account of a moderation in fuel price inflation) and a marginal slowdown in consumer services price inflation towards the end of 2022.

Headline consumer prices

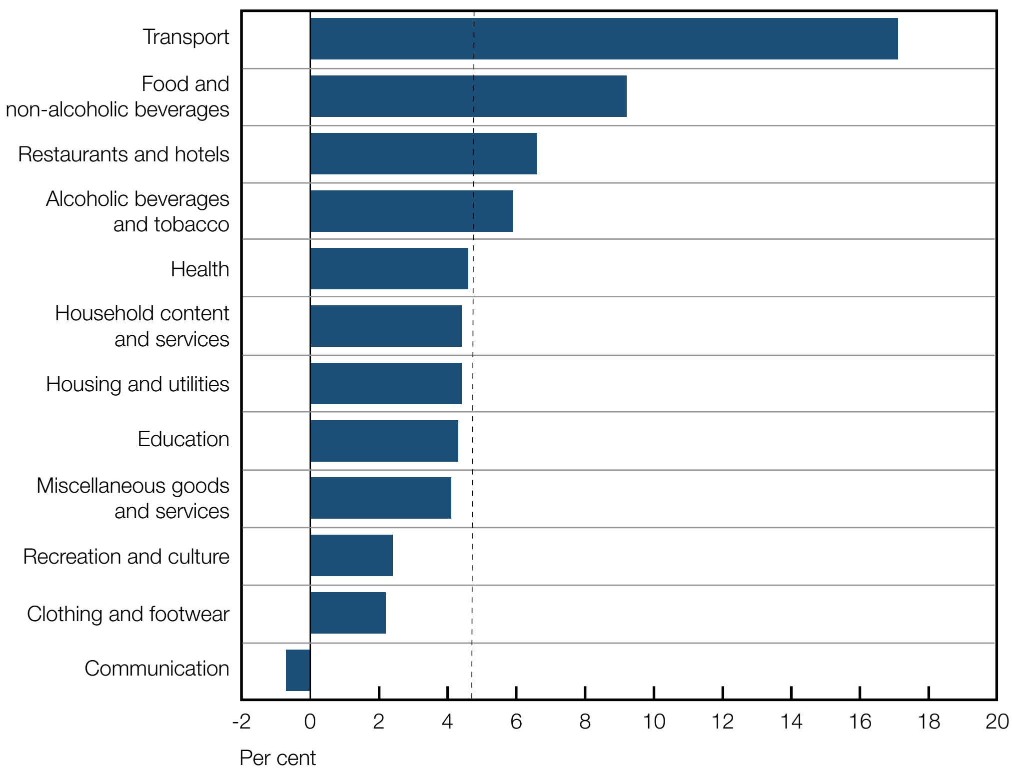



---- Midpoint of the inflation target range (4.5%)

Source: Stats SA

Price changes based on the classification of individual consumption by purpose (COICOP) categories indicated that annual average consumer price inflation in 2022 accelerated in 9 of the 12 COICOP categories and only decelerated in the remaining 3 categories. Transport price inflation accelerated the most, from 9.4% in 2021 to 17.1% in 2022, due to the sharp increase in international crude oil prices which resulted in record-high domestic fuel prices. The food and non-alcoholic beverages category recorded the second-largest annual average inflation rate of 9.2% in 2022.

Average consumer price inflation for 2022 by COICOP category

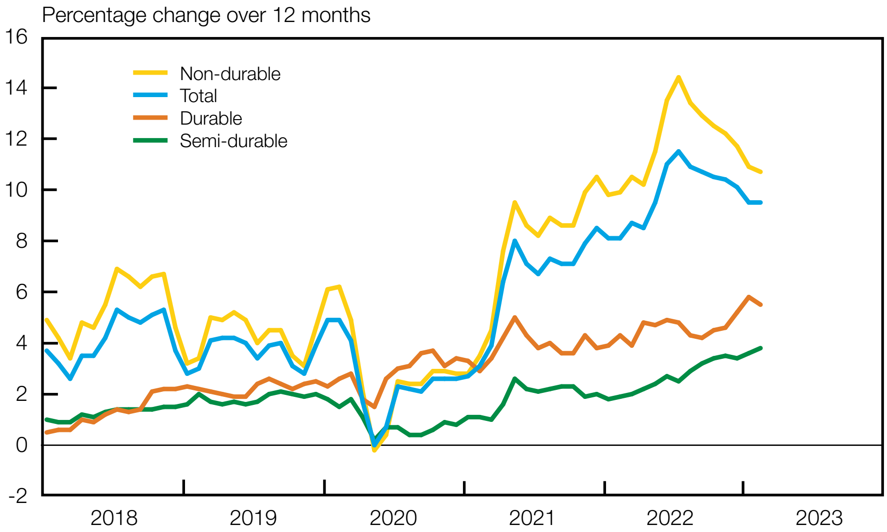



---- Midpoint of the inflation target range (4.5%)

Source: Stats SA

*Consumer goods price inflation* remained the main driver of overall consumer price inflation, recording double-digit rates during the second half of 2022. The gradual moderation in consumer goods price inflation from a high of 11.5% in July 2022 to 9.5% in January and February 2023 largely contributed to the slowdown in overall consumer price inflation as non-durable goods price inflation moderated from 14.4% to 10.7% over this period along with the decrease in fuel prices.

### Consumer goods prices




Source: Stats SA

Durable goods price inflation accelerated from 4.2% in September 2022 to 5.5% in February 2023 as new and used vehicle price inflation accelerated. Semi-durable goods price inflation remained below the midpoint of the inflation target range despite accelerating somewhat during 2022 and increased to 3.8% in February 2023 as the prices of clothing and footwear as well as household contents increased at a faster pace.

### Consumer price inflation

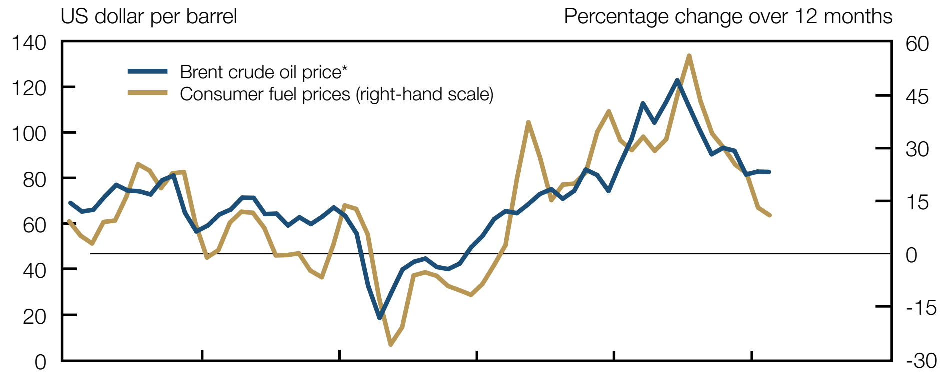
Annual average percentage change

| | Weight | 2019 | 2020 | 2021 | 2022 | Feb 2023 |
|---|---|---|---|---|---|---|
| Headline CPI | 100.00 | 4.1 | 3.3 | 4.5 | 6.9 | 7.0 |
| Headline CPI excluding food and non-alcoholic beverages, fuel and electricity | 74.40 | 4.1 | 3.4 | 3.1 | 4.3 | 5.2 |
| Goods | 48.68 | 3.6 | 2.6 | 6.3 | 9.9 | 9.5 |
| Non-durable | 35.71 | 4.2 | 3.0 | 7.6 | 11.9 | 10.7 |
| Semi-durable | 5.38 | 1.8 | 0.9 | 1.9 | 2.7 | 3.8 |
| Durable | 7.59 | 2.2 | 2.8 | 3.8 | 4.5 | 5.5 |
| Services | 51.32 | 4.6 | 3.9 | 2.9 | 3.9 | 4.6 |

Source: Stats SA

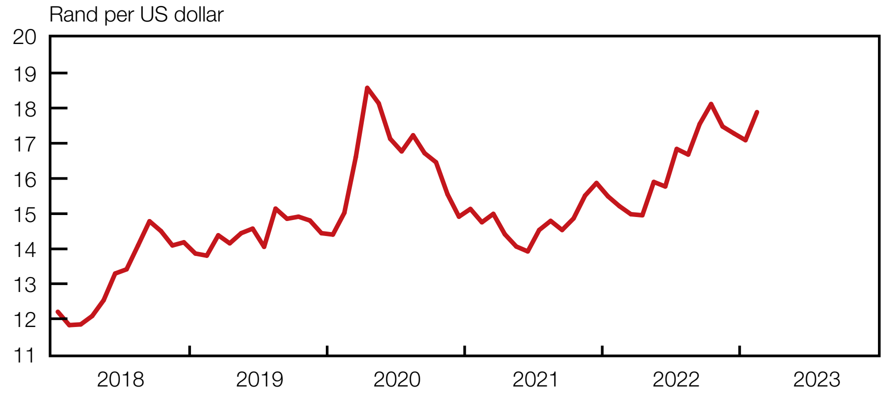
International crude oil prices declined notably in the second half of 2022 as expectations of a global recession increased and demand from China decreased due to renewed COVID-19 lockdown restrictions. The decrease in the international price of Brent crude oil from a monthly average of US$122.78 per barrel in June 2022 to US$82.66 per barrel in February 2023 contributed to the significant decrease in domestic fuel prices. Although the depreciation in the exchange value of the rand partially offset the benefits of lower crude oil prices, consumer fuel price inflation still decelerated significantly to 10.9% in February 2023 from a high of 56.2% in July 2022.

Brent crude oil and consumer fuel prices




* Monthly average

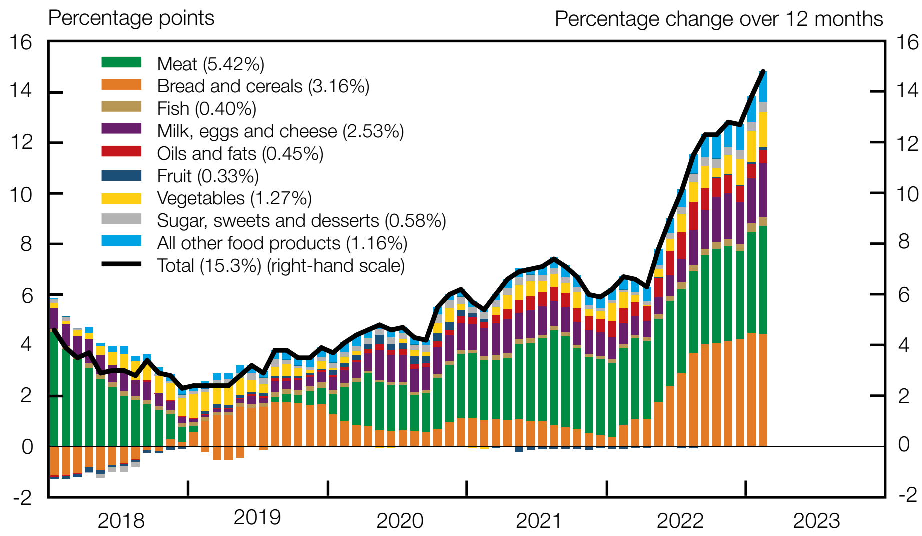
Exchange value of the rand




Sources: Refinitiv, Stats SA and SARB

*Consumer food price inflation* accelerated notably from 6.3% in April 2022 to 14.0% in February 2023, with accelerations in eight of the nine food price categories over this period. On an annual average basis, consumer food price inflation accelerated from 6.5% in 2021 to 9.5% in 2022.

Contributions to consumer food price inflation

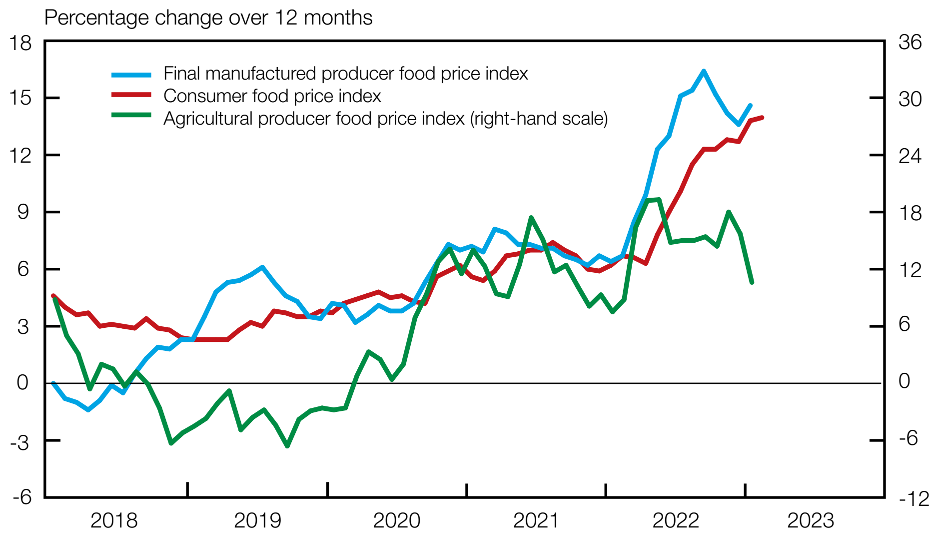



The numbers in brackets indicate weights in the consumer price index

Source: Stats SA

Price pressures in the highest-weighted food subcategories (i.e. meat; bread and cereals; and milk, cheese and eggs), which together account for 74% of the total food price basket, remained elevated in February 2023 in line with high price inflation in the corresponding agricultural producer food prices categories. Price inflation of bread and cereals amounted to 20.5% in February 2023, while that of meat was 11.4% and that of milk, cheese and eggs 12.3%. The acceleration in meat price inflation resulted largely from a notable increase in poultry prices as the increased intensity of electricity load-shedding led to poultry shortages. Oils and fats price inflation was also high at 16.7% in February 2023 despite being the only category where price inflation slowed in recent months. Consumer food price inflation followed the higher final manufactured producer food price inflation which accelerated to 16.4% in September 2022 before moderating somewhat to 14.6% in January 2023. Producer price inflation for agricultural products moderated from a recent peak of 19.3% in May 2022 to 10.6% in January 2023 as price increases of cereals and other crops, and especially fruit and vegetables, slowed.

Producer and consumer food prices

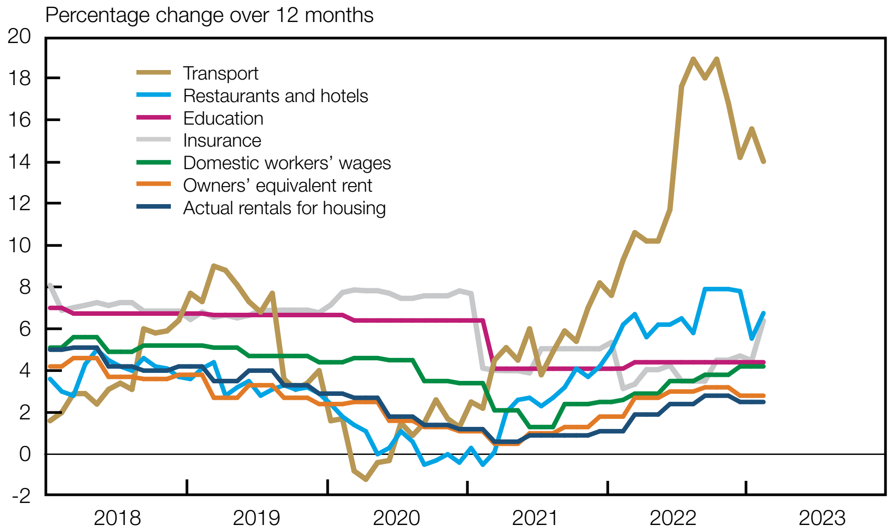



Source: Stats SA

Domestic consumer food price inflation continued to accelerate while global food price pressures waned, as evidenced by the downward trend in the international food price index of the United Nations' Food and Agriculture Organization (FAO) along with the easing of global supply chain disruptions. The year-on-year change in this index slowed significantly from 34.0% in March 2022 to -8.1% in February 2023, as decreases in the vegetable oils, dairy and meat price categories outweighed increases in the sugar and cereal categories. The year-on-year rate of increase in the rand-denominated international food price index decelerated to a lesser extent, from 39.9% in July 2022 to 8.1% in February 2023, due in part to the depreciation in the exchange value of the rand.

*Consumer services price inflation* remained relatively contained as it only accelerated from 3.4% in January 2022 to 4.6% in February 2023, with the annual average rate of increase accelerating to 3.9% in 2022 from 2.9% in 2021. Services price inflation accelerated mainly on account of the significant quickening in transport services price inflation, which peaked at 18.9% in October 2022 before moderating to 14.0% in February 2023 as fuel prices decreased. Housing and utilities price inflation also accelerated gradually throughout 2022 before moderating somewhat in recent months as actual and owner-occupied housing rental price inflation (with the largest weight of 32.1% in the consumer services price basket) decelerated from 2.8% and 3.2% respectively in November 2022 to 2.5% and 2.8% respectively in January 2023. Similarly, restaurant and hotel services price inflation accelerated during most of 2022 but slowed to 5.5% in January 2023, before quickening again in February. In addition, health insurance price inflation (medical aid contributions) accelerated to 7.4% in February 2023.

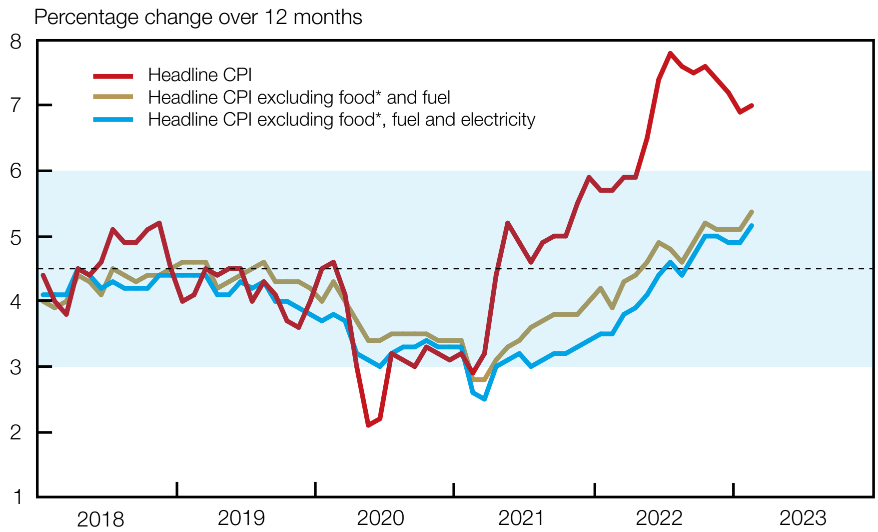
Consumer services prices




Source: Stats SA

Most measures of *underlying inflationary pressures* accelerated in 2022 and surpassed the midpoint of the inflation target range. When excluding food, non-alcoholic beverages and fuel prices from headline consumer price inflation, the resultant inflation measure accelerated steadily from 3.9% in February 2022 to 5.4% in February 2023. Likewise, the South African Reserve Bank's (SARB) preferred measure of core inflation, which in addition excludes electricity prices, gathered some pace as it accelerated from 3.5% to 5.2% over the same period. When expressed at an annual average rate, core inflation quickened from 3.1% in 2021 to 4.3% in 2022.

Headline and underlying measures of consumer prices




---- Midpoint of the inflation target range (4.5%)

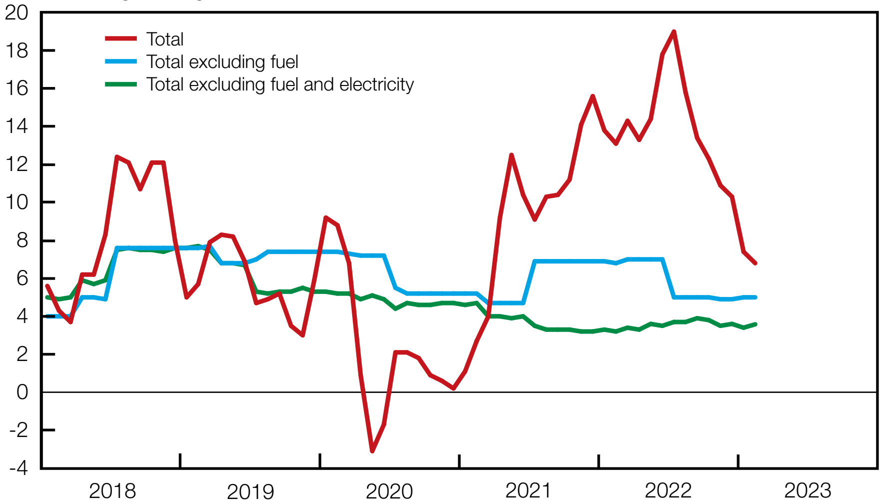
* Food includes non-alcoholic beverages

Source: Stats SA

Annual average *administered price inflation* accelerated significantly from 9.2% in 2021 to 14.0% in 2022, mirroring the marked increase in the price of fuel. However, administered price inflation decelerated notably from 18.9% in July 2022 to 6.8% in February 2023 following the recent decrease in fuel prices. When excluding fuel prices, administered price inflation also moderated from 7.0% in June 2022 to 5.0% in January and February 2023. Moreover, when electricity prices are also excluded, underlying administered price inflation decelerated gradually from 3.9% in September 2022 to 3.6% in February 2023.

### Administered prices

Percentage change over 12 months




Source: Stats SA

Average headline *consumer price inflation expectations*[17] for 2023 were revised marginally higher in the first quarter of 2023 compared with the previous quarter. Although inflation is expected to moderate over the longer term, expectations increased on average over the shorter forecast horizons compared with the previous survey. Headline inflation was expected to average 6.3% in 2023 (6.1% previously) before slowing to 5.8% in 2024 (5.6% previously) and 5.5% in 2025 (surveyed for the first time).

17 As measured by the *Survey of Inflation Expectations* conducted by the BER in the first quarter of 2023.

### Headline consumer price inflation expectations

Per cent, as surveyed in the first quarter of 2023

| Average inflation expected for: | Financial analysts | Business representatives | Trade union representatives | All surveyed participants |
|---|---|---|---|---|
| 2023 | 5.6 | 6.8 | 6.5 | 6.3 |
| 2024 | 4.9 | 6.6 | 6.1 | 5.8 |
| 2025 | 4.6 | 6.2 | 5.8 | 5.5 |
| Five years ahead | 4.8 | 5.9 | 5.8 | 5.5 |

Source: BER

Average five-years-ahead inflation expectations remained unchanged at 5.5% in the first quarter of 2023. Household inflation expectations for the coming 12 months increased from 6.3% in the fourth quarter of 2022 to 7.0% in the first quarter of 2023 as all income groups adjusted their expectations upwards. Moreover, households adjusted their five-year inflation expectations higher from 8.4% in the fourth quarter of 2022 to 9.9% in the first quarter of 2023.

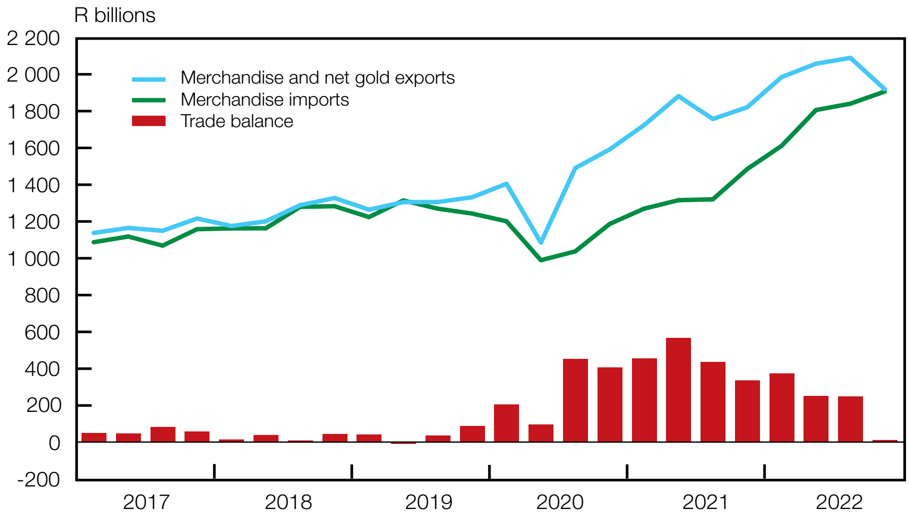
# External economic accounts

## Current account[18]

18 Unless stated to the contrary, the current account transaction flows referred to in this section are all seasonally adjusted and annualised.

The value of South Africa's merchandise and net gold exports decreased in the fourth quarter of 2022 due to both lower volumes and lower prices, ending a period of an almost uninterrupted increase since the COVID-19-induced low in the second quarter of 2020. By contrast, the value of merchandise imports continued to increase in the fourth quarter as prices rose. The surplus on South Africa's trade balance therefore narrowed noticeably to R12.2 billion in the fourth quarter of 2022 from R249 billion in the third quarter.

Value of South Africa's exports and imports




Seasonally adjusted and annualised

Sources: Stats SA and SARB

The balance on the current account of the balance of payments switched to a deficit of R174 billion (2.6% of GDP) in the fourth quarter of 2022 from a revised surplus of R3.1 billion in the third quarter as the much smaller trade surplus more than offset the decline in the deficit

Current account of the balance of payments

R billions, seasonally adjusted and annualised

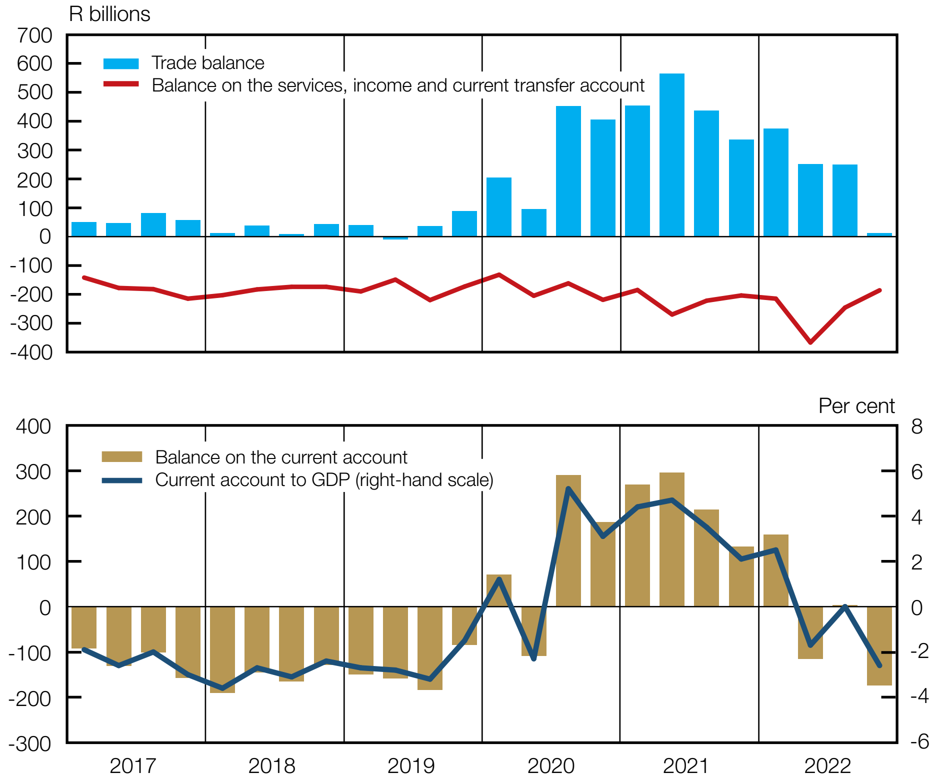
| | 2021 | 2022 | | | | |
|---|---|---|---|---|---|---|
| | Year | Q1 | Q2 | Q3 | Q4 | Year |
| Merchandise exports | 1 689 | 1 910 | 1 964 | 2 007 | 1 829 | 1 927 |
| Net gold exports | 108 | 76 | 95 | 83 | 90 | 86 |
| Merchandise imports | -1 349 | -1 612 | -1 807 | -1 841 | -1 907 | -1 792 |
| Trade balance | 448 | 374 | 252 | 249 | 12 | 222 |
| Net services, income and current transfer payments | -220 | -215 | -367 | -246 | -186 | -253 |
| Balance on current account | 228 | 159 | -115 | 3 | -174 | -32 |
| *As a percentage of gross domestic product* | | | | | | |
| Trade balance | 7.2 | 5.8 | 3.8 | 3.7 | 0.2 | 3.3 |
| Services balance | -1.1 | -1.3 | -1.3 | -1.6 | -1.3 | -1.4 |
| Income balance | -1.9 | -1.5 | -3.8 | -1.7 | -1.3 | -2.1 |
| Current transfer balance | -0.6 | -0.6 | -0.4 | -0.3 | -0.2 | -0.4 |
| Balance on current account | 3.7 | 2.5 | -1.7 | 0.0 | -2.6 | -0.5 |

Components may not add up to totals due to rounding off.

Sources: Stats SA and SARB

on the services, income and current transfer account. On an annual basis, the balance of the current account switched to a deficit of R31.8 billion (0.5% of GDP) in 2022 from a surplus of R228 billion (3.7% of GDP) in 2021 – the first annual deficit since 2019.

Current account of the balance of payments

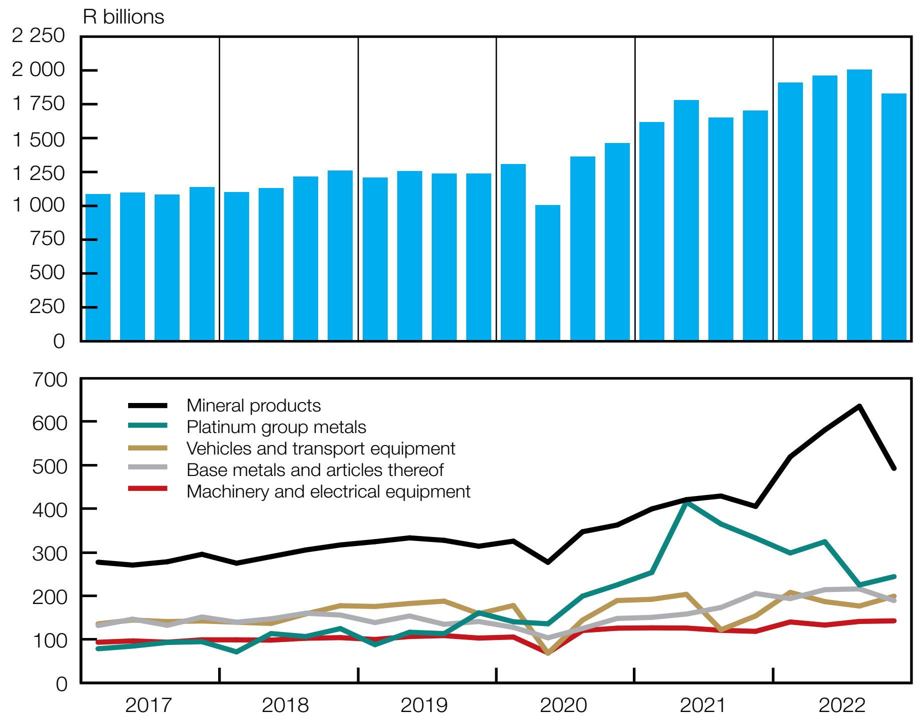



Seasonally adjusted and annualised
Sources: Stats SA and SARB

The value of merchandise exports contracted by 8.9% in the fourth quarter of 2022. Mining exports decreased significantly, weighed down by mineral products, base metals and articles thereof as well as pearls, precious and semi-precious stones. The marked decline in the export value of mineral products reflected lower exports of coal, manganese ore, iron ore and chromium ore. Except for iron ore, the export values of these minerals were largely suppressed by lower realised rand prices. All export volumes were negatively affected by the Transnet strike that hampered rail freight and port operations in October 2022. The lower export value of base metals and articles thereof mainly reflected a decrease in ferro-chromium and nickel exports, which outweighed the increase in PGMs in the fourth quarter of 2022 from a low base in the third quarter.

The 2.1% decrease in the value of manufacturing exports in the fourth quarter of 2022 mainly reflected contractions in paper and paper products, chemical products, processed food, beverages and tobacco as well as wood and products of wood. The export value of paper and paper products decreased the most, following a substantial increase in the third quarter. These decreases were partly countered by increases in the export values of vehicles and transport equipment as well as machinery and electrical equipment. The export value of agricultural products increased in the fourth quarter of 2022, boosted by increased trade of fruit, especially grapes.

## Value of merchandise exports*

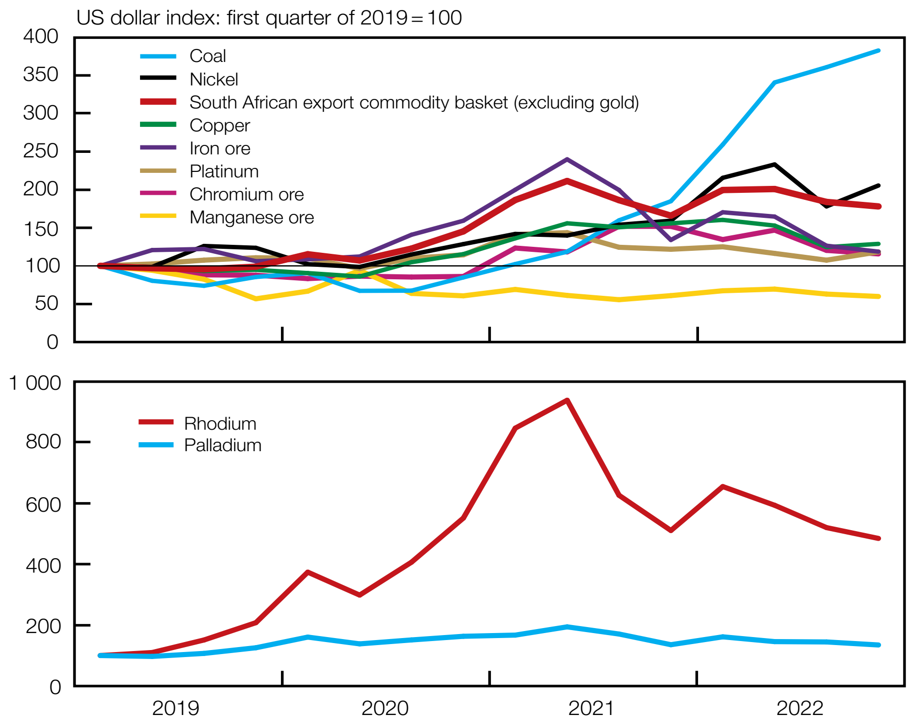



* Excluding net gold exports

Seasonally adjusted and annualised

Sources: Stats SA and SARB

## Selected South African export commodity prices*




* Quarterly averages

Sources: Afriforesight, World Bank and SARB

The United States (US) dollar price of a basket of domestically produced non-gold export commodities declined further by 3.2% in the fourth quarter of 2022 due to the continued decrease in the prices of rhodium, palladium, iron ore, manganese ore and chromium ore.

By contrast, the prices of platinum, nickel, coal and copper increased in the fourth quarter due to global supply concerns.

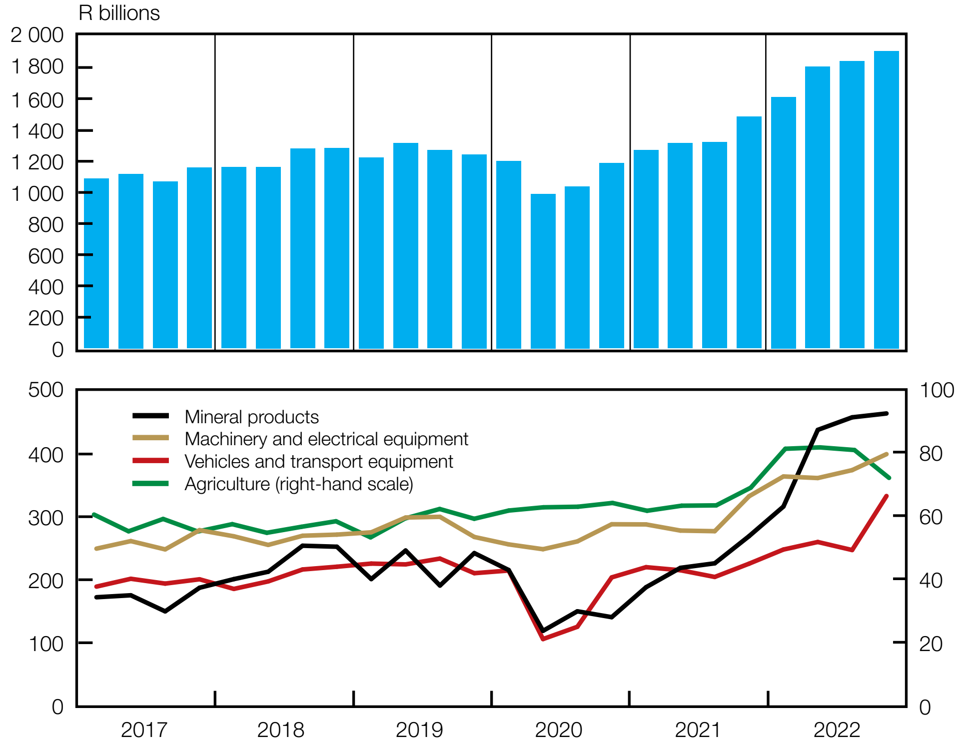
The rand price of merchandise exports decreased further by 2.8% in the fourth quarter of 2022 and the volume contracted by 6.2%, primarily due to lower mining and manufacturing export volumes. On an annual basis, the volume of merchandise exports as a ratio of GDP increased from 22.7% in 2021 to 23.7% in 2022.

The average US dollar price of gold on the London market declined in October 2022 but then increased in November and December due to, among other factors, the weaker US dollar and expectations that the US Federal Reserve (Fed) may slow the pace of monetary policy tightening. On average, the price of gold remained steady at about US$1 729 per fine ounce in the fourth quarter of 2022. For the year as a whole, the price of gold remained almost unchanged, rising only marginally from US$1 800 in 2021 to US$1 801 in 2022.

The average realised rand price of net gold exports increased by 2.5% in the fourth quarter of 2022 as the exchange value of the rand against the US dollar depreciated. The value of net gold exports increased by 8.7% in the fourth quarter of 2022 as the physical quantity also increased. On an annual basis, the value of net gold exports contracted notably by 20.2% to R86.1 billion in 2022 as the physical quantity of net gold exports decreased along with a contraction in the volume of gold produced.

The value of merchandise imports increased further in the fourth quarter of 2022, largely boosted by manufactured products and, to a lesser extent, also mining products. The increase in the value of manufacturing imports mainly reflected vehicles and transport equipment as well as machinery and electrical equipment. The latter continued to be buoyed by the importation of energy-related products, including electric accumulators, generating sets, static converters and a steam generator. Vehicles and transport equipment were mainly driven by higher imports of passenger vehicles and the importation of several aircraft.

Value of merchandise imports

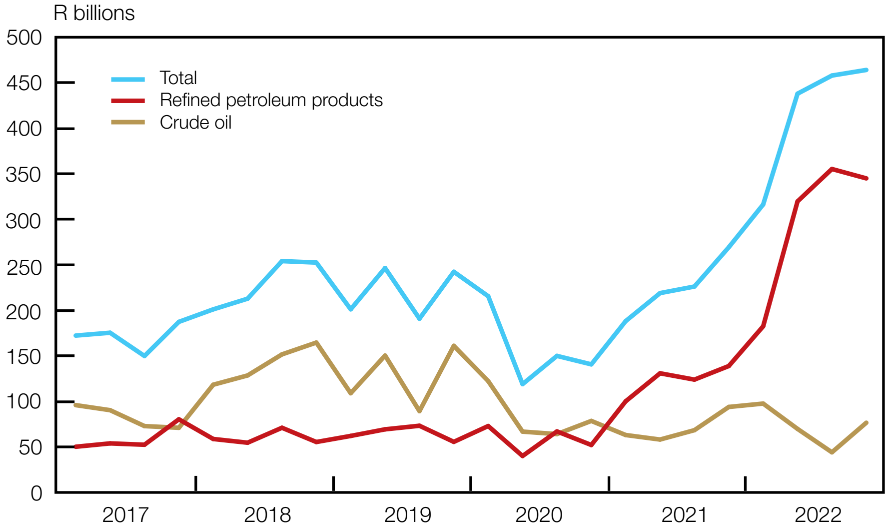



Seasonally adjusted and annualised

Sources: Stats SA and SARB

The slight increase in the value of mining imports in the fourth quarter of 2022 resulted from mineral products as well as pearls, precious and semi-precious stones. In contrast to recent quarters where mineral imports were largely driven by higher imports of refined petroleum products, the increase in the fourth quarter of 2022 was largely driven by higher crude oil imports. This could be attributed to the anticipated recommissioning of an oil refinery after operations were halted following an explosion in 2020. The value of crude oil imports increased markedly by 73.7% in the fourth quarter of 2022 due to higher volumes. The increase in the physical quantity of crude oil imports more than offset the 4.1% decline in the average realised rand price thereof, from R1 856 per barrel in the third quarter of 2022 to R1 779 per barrel in the fourth quarter.

Value of mineral imports



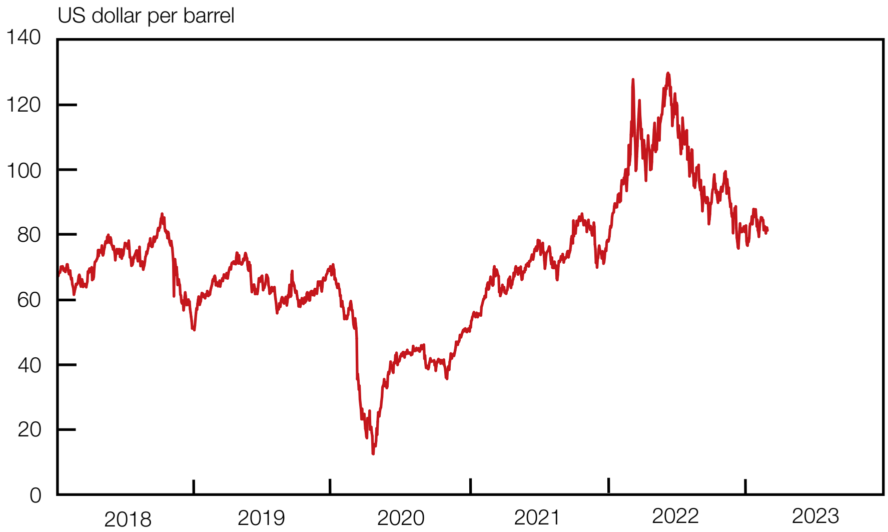

Seasonally adjusted and annualised
Sources: Stats SA and SARB

19 Residual fuel oils are products intended f or use, advertised for use, put for use, or otherwise marketed or disposed of for use in furnaces, boilers, ships and boats.

The significant decrease in the value of imported petrol and residual fuel[19] in the fourth quarter of 2022 outweighed the increased importation of distillate fuel. As a result, the overall import value of refined petroleum products declined in the fourth quarter of 2022 following four consecutive quarterly increases. However, on an annual basis, the import value of refined petroleum products rose sharply due to reduced domestic oil-refining capacity as reflected in the increase in the ratio of refined petroleum product imports to total merchandise imports from 9.2% in 2021 to 16.8% in 2022. The import value of distillate fuel increased substantially from R71.7 billion in 2021 to R179 billion in 2022, buoyed by strong demand from Eskom for the operation of the open-cycle gas turbines to bolster generating capacity during periods of peak demand.

The spot price of Brent crude oil declined in November and December 2022 following an increase in October. The declines reflected, among other factors, concerns over a slowdown in global economic growth amid tighter financial conditions and the implementation of renewed COVID-19 lockdowns in China. On average, the spot price of Brent crude oil decreased by 11.9% from US$100.88 per barrel in the third quarter of 2022 to US$88.88 per barrel in the fourth quarter. However, the spot price of Brent crude oil increased slightly from US$81.54 per barrel in December 2022 to US$82.66 per barrel in February 2023, supported by, among other factors, expectations that the relaxation of COVID-19 restrictions in China would result in increased demand.

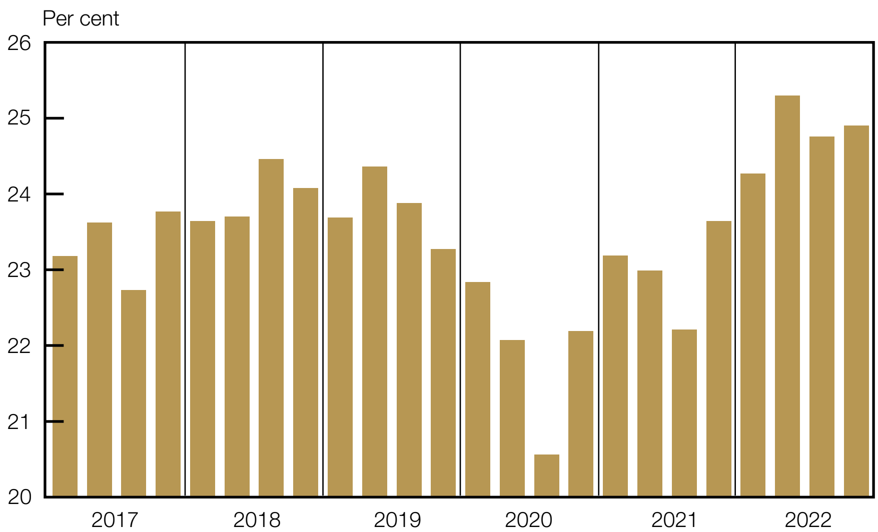
Brent crude oil price




Source: Refinitiv

The volume of merchandise imports increased marginally by 0.4% in the fourth quarter of 2022 following a decrease in the third quarter. Consequently, the import penetration ratio (i.e. real merchandise imports as a ratio of GDE) increased slightly from 24.8% in the third quarter of 2022 to 24.9% in the fourth quarter.

Import penetration ratio

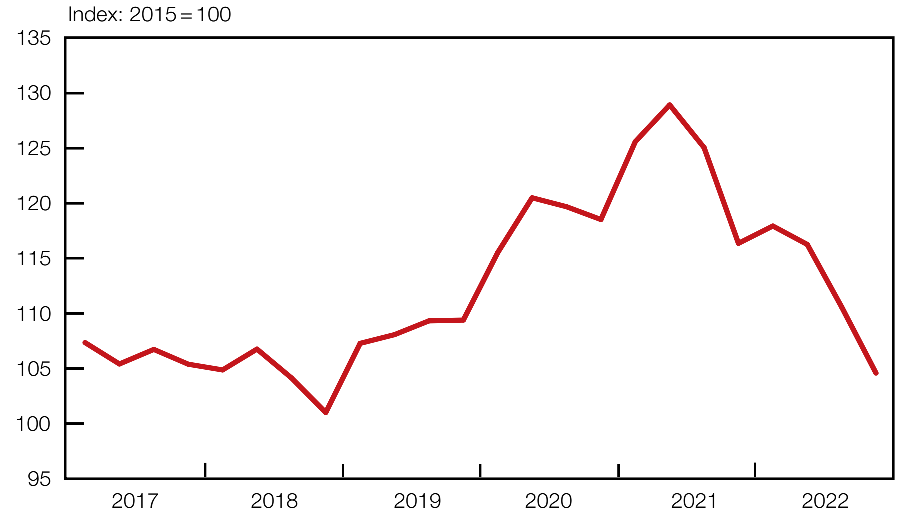



Sources: Stats SA and SARB

The rand price of merchandise imports increased further by 3.2% in the fourth quarter of 2022 – the 10th consecutive quarterly increase – due to higher prices of goods in some of South Africa's trading partners and the depreciation in the average exchange value of the rand.

South Africa's terms of trade deteriorated further in the fourth quarter of 2022 as the rand price of imports of goods and services increased while that of exports decreased. For the year as a whole, the terms of trade also deteriorated as the rand price of imports increased more than that of exports.

Terms of trade*

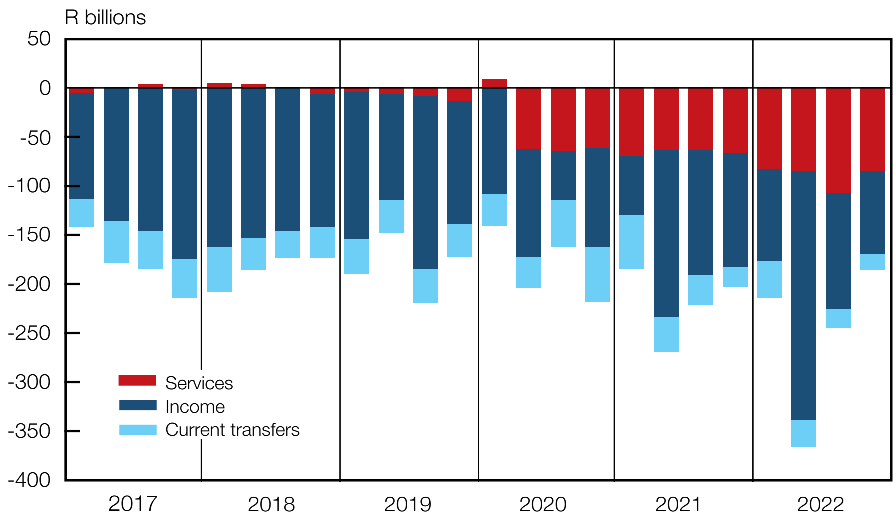



* Including gold

Sources: Stats SA and SARB

The shortfall on the services, income and current transfer account narrowed for a second consecutive quarter from R246 billion (3.6% of GDP) in the third quarter of 2022 to R186 billion (2.8% of GDP) in the fourth quarter. All three sub-accounts contributed to the smaller deficit, with the narrowing in the income deficit contributing the most. For 2022 as a whole, the shortfall on the services, income and current transfer account widened to R253 billion, or 3.8% of GDP, from 3.6% of GDP in 2021.

Net services, income and current transfer payments




Seasonally adjusted and annualised

Sources: Stats SA and SARB

Net services payments declined in the fourth quarter of 2022 as gross payments decreased notably due to lower payments for transportation services as well as other services rendered, while gross receipts increased. Net travel receipts increased in the fourth quarter of 2022 as both gross travel receipts and payments continued to increase given that the number of inbound and outbound tourists rose further with the easing of global cross-border travel restrictions.

The high net services payments since the second quarter of 2020 remained at an elevated level throughout 2022, primarily due to higher transportation costs for both freight and passenger services. Net transportation payments increased sharply in 2022 as the value of imported goods reached historical highs alongside high fuel prices and shipping costs. On balance, the noticeable increase in net travel receipts moderated the widening of the services deficit during 2022.

The deficit on the income account narrowed in the fourth quarter of 2022 as the decrease in gross income payments exceeded that in gross income receipts. Gross dividend payments decreased notably by 36.4% in the fourth quarter of 2022 while gross dividend receipts decreased by 13.9%, resulting in a net dividend surplus – the third surplus recorded in recent history. On an annual basis, gross dividend payments and receipts increased by 17.5% and 8.4% respectively in 2022. Following a marginal decrease in the third quarter of 2022, gross interest payments increased in the fourth quarter, contributing to an increase of 9.4% for 2022 compared with an increase of 6.1% in 2021. The income deficit continued to be the largest contributor to the overall deficit on the services, income and current transfer account in 2022 at 54.4%, compared with 53.8% in 2021. The income deficit as a percentage of GDP increased to 2.1% in 2022 from 1.9% in 2021.

Net current transfer payments declined further in the fourth quarter of 2022 as gross current transfer receipts increased at a faster pace than gross current transfer payments. Net current transfer payments as a percentage of GDP decreased to 0.4% in 2022 from 0.6% in 2021.

## Financial account

The net inflow of capital on South Africa's financial account of the balance of payments (excluding unrecorded transactions) increased to R23.5 billion in the fourth quarter of 2022 from R14.6 billion in the third quarter. On a net basis, direct investment, other investment and reserve assets recorded inflows, while portfolio investment and financial derivatives registered outflows. Net financial account inflows as a ratio of GDP increased from 0.9% in the third quarter of 2022 to 1.4% in the fourth quarter. The cumulative flows on the financial account switched to an inflow of R67.9 billion (1.0% of GDP) in 2022 from an outflow of R244.5 billion (3.9% of GDP) in 2021.

### Net financial transactions

R billions

| | 2021 | 2022 | | | | |
|---|---|---|---|---|---|---|
| | Year | Q1 | Q2 | Q3 | Q4 | Year |
| Change in liabilities | | | | | | |
| Direct investment | 604.4 | 39.9 | 26.2 | 11.9 | 67.0 | 144.9 |
| Portfolio investment | -408.2 | 60.7 | 39.8 | -32.0 | -26.1 | 42.4 |
| Financial derivatives | -245.8 | -46.6 | -55.4 | -98.0 | -82.7 | -282.7 |
| Other investment | 13.7 | 79.8 | 48.3 | 9.5 | 48.6 | 186.2 |
| Change in assets | | | | | | |
| Direct investment | -0.3 | -19.8 | 6.1 | -6.2 | -20.3 | -40.1 |
| Portfolio investment | -395.2 | -53.4 | -44.4 | 3.1 | -12.4 | -107.2 |
| Financial derivatives | 249.3 | 46.7 | 51.9 | 80.0 | 75.7 | 254.2 |
| Other investment | 5.0 | -69.2 | -38.7 | 72.9 | -26.6 | -61.7 |
| Reserve assets | -67.3 | -6.8 | -35.2 | -26.5 | 0.4 | -68.2 |
| **Total identified financial transactions*** | **-244.5** | **31.3** | **-1.4** | **14.6** | **23.5** | **67.9** |
| *As a percentage of gross domestic product* | *-3.9* | *2.0* | *-0.1* | *0.9* | *1.4* | *1.0* |

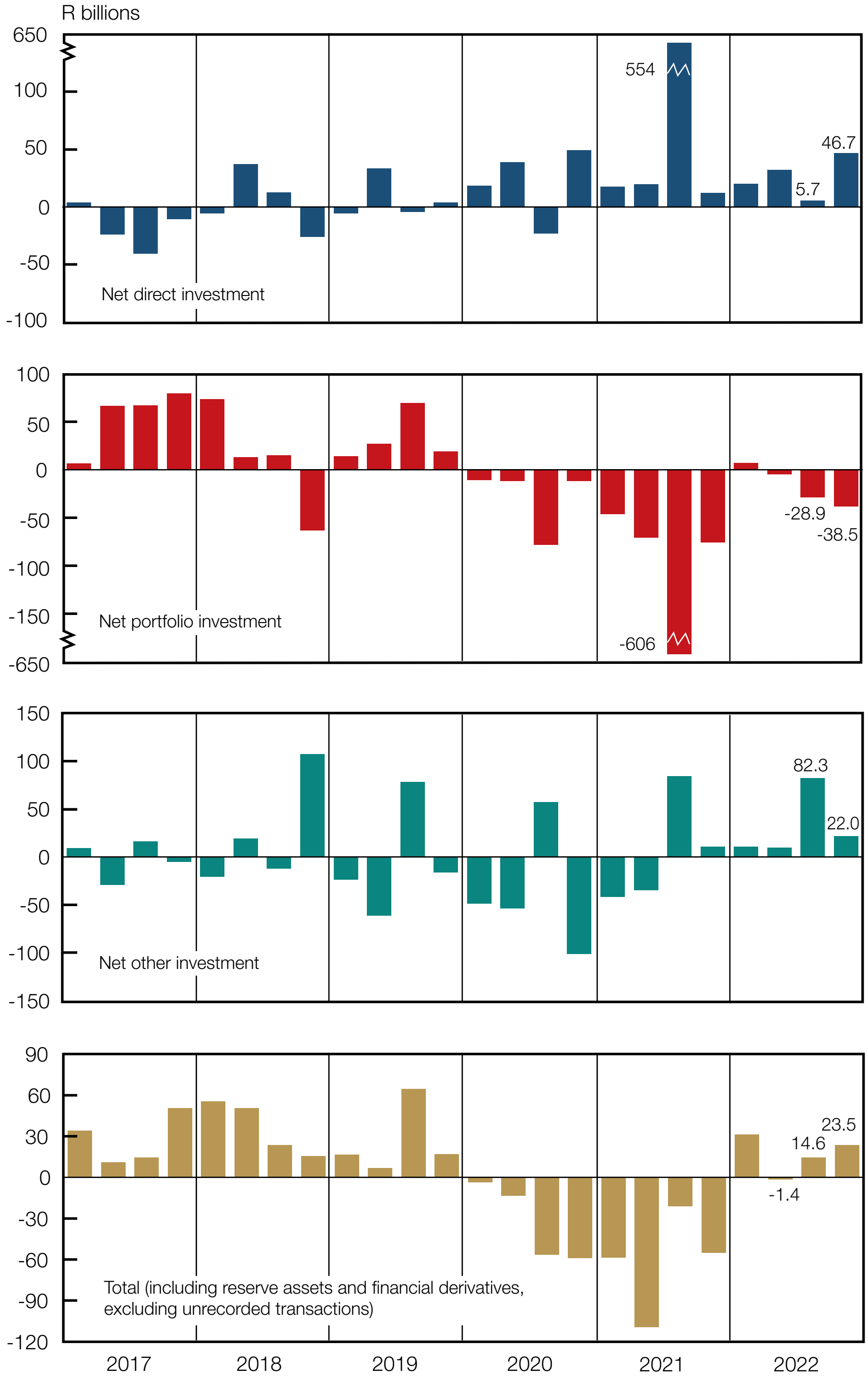
* Excluding unrecorded transactions
Components may not add up to totals due to rounding off.
Inflow (+)/outflow (-)

Source: SARB

## Foreign-owned assets in South Africa

South Africa's direct investment liabilities recorded a significantly larger inflow of R67.0 billion in the fourth quarter of 2022 following an inflow of R11.9 billion in the third quarter as a non-resident parent company in the commerce sector increased its equity investment in a domestic subsidiary. A domestic company in the telecommunications sector also issued shares to its parent company to finance the acquisition of a foreign company. In addition, non-resident parent entities granted loans to domestic subsidiaries over the period. However, inward direct investment decreased substantially from R604.4 billion in 2021 to R144.9 billion in 2022.

Financial account of the balance of payments




Source: SARB

Portfolio investment liabilities recorded another outflow of R26.1 billion in the fourth quarter of 2022 following an outflow of R32.0 billion in the third quarter as non-residents' net sales of domestic debt securities outweighed their net purchases of domestic equity securities. Non-residents' net purchases of domestic equity securities of R1.1 billion in the fourth quarter of 2022 followed net sales of R22.4 billion in the third quarter, while their net sales of domestic debt securities of R27.2 billion in the fourth quarter of 2022 were less than the net sales of R9.6 billion in the third quarter. Non-resident investors' net purchases of domestic debt and equity securities amounted to R42.4 billion in 2022 compared with net sales of R408.2 billion in 2021.

Other investment liabilities recorded an inflow of R48.6 billion in the fourth quarter of 2022 following an inflow of R9.5 billion in the preceding quarter as non-residents granted short-term loans to the domestic banking sector and national government received a €300 million climate change loan from the Agence Française de Développement (AFD). On a cumulative basis, other investment liability inflows increased significantly from R13.7 billion in 2021 to R186.2 billion in 2022.

## South African-owned assets abroad

South Africa's direct investment assets recorded an outflow of R20.3 billion in the fourth quarter of 2022 following an outflow of R6.2 billion in the third quarter. A domestic company in the telecommunications sector acquired a majority shareholding in a non-resident entity, which was only partially countered by a domestic technology investor's sale of shares in a foreign subsidiary. Direct investment asset outflows increased from R0.3 billion in 2021 to R40.1 billion in 2022.

South Africa's foreign portfolio investment assets switched from an inflow of R3.1 billion in the third quarter of 2022 to an outflow of R12.4 billion in the fourth quarter as the domestic private sector purchased foreign equity securities, which was only partially countered by its sales of foreign debt securities. Cumulatively, portfolio investment assets recorded an outflow of R107.2 billion in 2022 following a significant outflow of R395.2 billion in 2021.

Other investment assets switched from an inflow of R72.9 billion in the third quarter of 2022 to an outflow of R26.6 billion in the fourth quarter as the domestic private banking sector granted short-term loans to non-residents, which outweighed the repatriation of foreign deposits from non-resident banks. Other investment assets switched to an outflow of R61.7 billion in 2022 from an inflow of R5.0 billion in 2021.

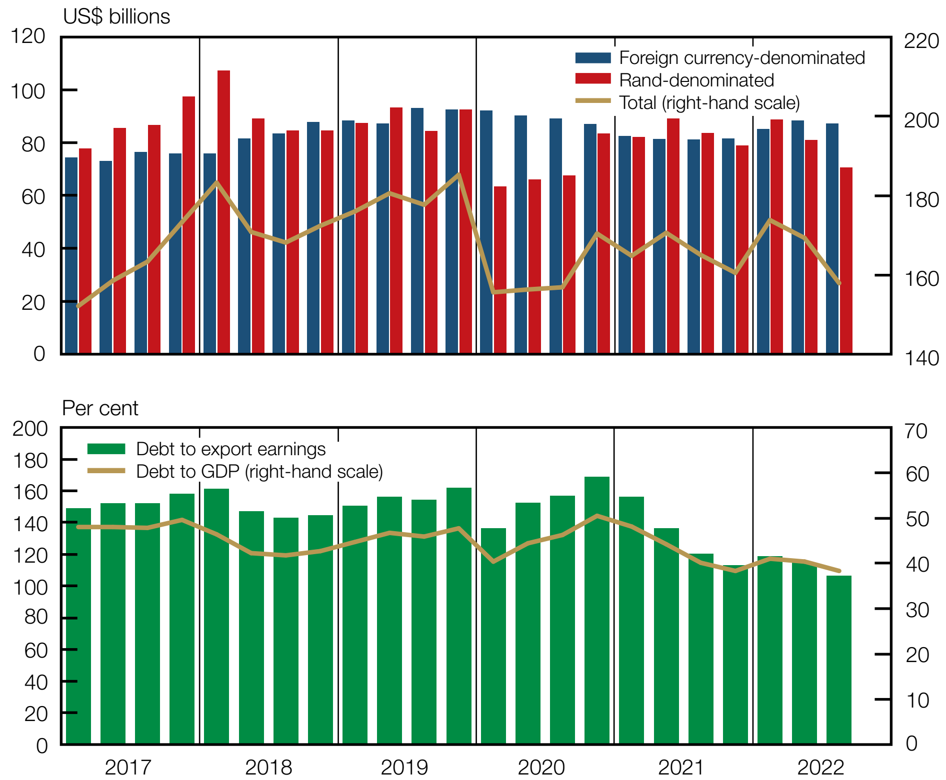
## Foreign debt

South Africa's total external debt decreased from US$169.3 billion at the end of June 2022 to US$157.9 billion at the end of September. However, expressed in rand terms, South Africa's total external debt increased from R2 752 billion to R2 826 billion over the same period as the exchange value of the rand depreciated against the US dollar.

Foreign currency-denominated external debt decreased from US$88.3 billion at the end of June 2022 to US$87.2 billion at the end of September due to the redemption of an international bond of US$1 billion by a public corporation as well as a decrease in short-term financing to the domestic banking sector.

Rand-denominated external debt, expressed in US dollar, decreased notably from US$81.0 billion in June 2022 to US$70.7 billion in September, mainly due to the decrease in the US dollar value of rand-denominated external debt following the depreciation in the exchange value of the rand over the period. The net purchases of domestic rand-denominated bonds by non-residents were also outweighed by the decrease in the market value of these bonds.

## Foreign debt




Source: SARB

## Foreign debt of South Africa

US$ billions at end of period

| | 2021 | | | 2022 | | |
|---|---|---|---|---|---|---|
| | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Foreign currency-denominated debt | 81.4 | 81.3 | 81.5 | 85.1 | 88.3 | 87.2 |
| Debt securities | 27.6 | 27.8 | 27.8 | 28.7 | 31.0 | 30.0 |
| Other | 53.8 | 53.5 | 53.7 | 56.4 | 57.3 | 57.2 |
| Public sector | 17.1 | 16.1 | 16.3 | 16.9 | 16.8 | 17.7 |
| Monetary sector | 14.4 | 14.7 | 14.6 | 15.1 | 15.8 | 14.9 |
| Non-monetary private sector | 22.3 | 22.7 | 22.8 | 24.4 | 24.7 | 24.6 |
| Rand-denominated debt | 89.2 | 83.7 | 79.0 | 88.7 | 81.0 | 70.7 |
| Debt securities | 59.2 | 53.3 | 51.9 | 57.6 | 50.5 | 43.3 |
| Other | 30.0 | 30.4 | 27.1 | 31.1 | 30.5 | 27.4 |
| Total foreign debt | 170.6 | 165.0 | 160.6 | 173.8 | 169.3 | 157.9 |
| *As a percentage of gross domestic product* | *44.2* | *40.0* | *38.3* | *41.0* | *40.3* | *38.2* |
| *As a percentage of total export earnings* | *136.2* | *120.3* | *113.0* | *118.5* | *114.6* | *106.4* |

Source: SARB

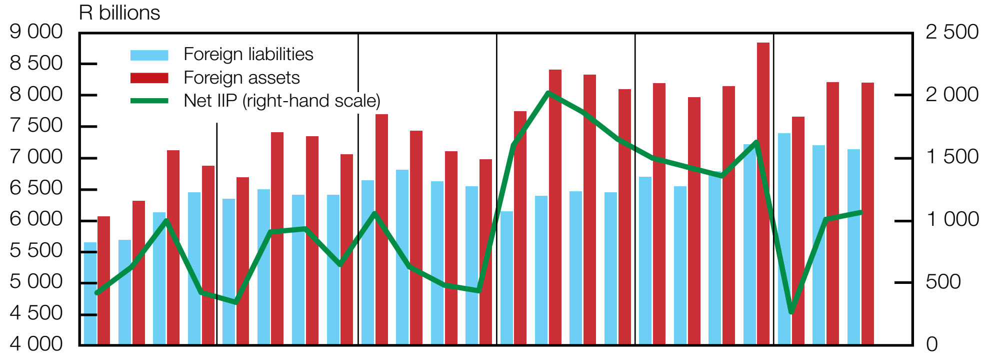
South Africa's total external debt as a ratio of annual GDP[20] decreased from 40.3% at the end of June 2022 to 38.2% at the end of September. Similarly, the ratio of external debt to export earnings decreased from 114.6% to 106.4% over the same period.

20 Annual GDP is calculated as the sum of the most recent four quarters of nominal GDP.

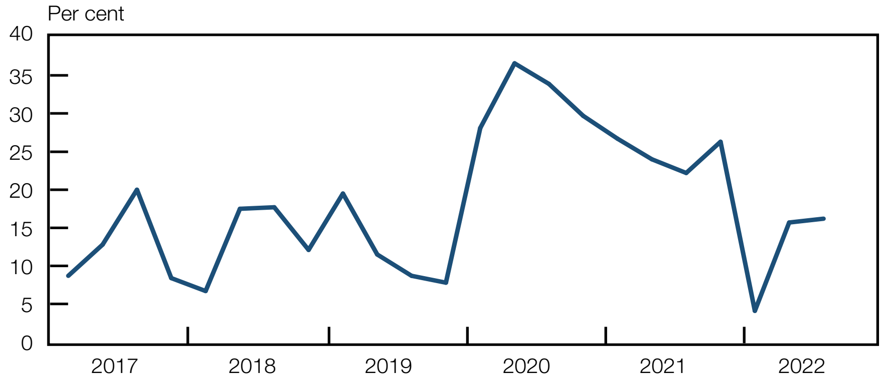
## International investment position

South Africa's positive net international investment position (IIP) increased marginally from a revised R1 008 billion at the end of June 2022 to R1 065 billion at the end of September. This reflected a smaller decrease in foreign assets than in foreign liabilities and the greater impact of the exchange value of the rand on foreign assets than foreign liabilities. The nominal effective exchange rate (NEER) of the rand decreased, on balance, by 4.6% in the third quarter of 2022.

South Africa's international investment position




Net international investment position to GDP




Source: SARB

The market value of South Africa's foreign assets (outward investment) decreased marginally from a revised R8 213 billion at the end of June 2022 to R8 203 billion at the end of September. This reflected a decrease in all functional categories except financial derivatives and reserve assets. Direct investment contracted mainly due to the valuation effects of a decrease in the share price of a large dual-listed company with a primary listing abroad. Portfolio investment decreased mainly due to the valuation effects from lower global share prices, which was only partially countered by the depreciation in the exchange value of the rand. Other investment assets decreased as non-residents repaid short-term loans to the domestic banking sector, while reserve assets increased because of the valuation effects from the depreciation of the exchange value of the rand.

The market value of South Africa's foreign liabilities (inward investment) decreased by 0.9% from a revised R7 204 billion at the end of June 2022 to R7 139 billion at the end of September. This reflected a decrease in the direct and portfolio investment categories, while financial derivatives and other investment increased. Valuation effects from the decrease in the FTSE/JSE All-Share Index (Alsi) of 3.8% in the third quarter of 2022 contributed to the decrease in both direct and portfolio investment liabilities. The decline in portfolio investment in the third quarter was exacerbated by the redemption of an international bond to the value of US$1 billion by a public corporation as well as net sales of shares by non-residents. Other investment liabilities increased as non-residents increased deposits with the domestic private banking sector and national government received a loan from the World Bank.

21 Annual GDP is calculated as the sum of the most recent four quarters of nominal GDP.

Foreign assets as a ratio of annual GDP[21] decreased from 128.8% at the end of June 2022 to 125.9% at the end of September, while foreign liabilities decreased from 113.0% to 109.5% over the same period. This resulted in an increase in the positive net IIP from 15.8% of GDP at the end of June 2022 to 16.3% of GDP at the end of September.

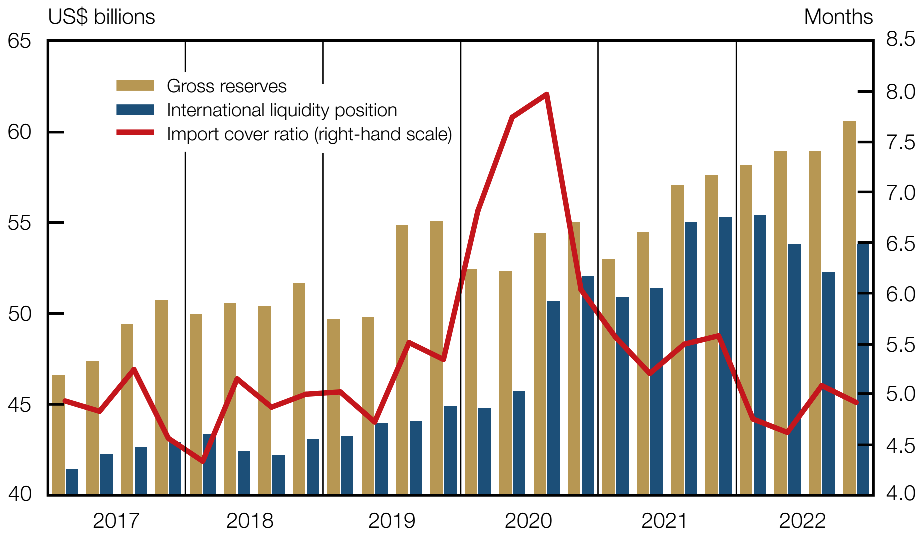
## International reserves and liquidity

South Africa's international reserves decreased marginally by R0.4 billion (or R357 million) in the fourth quarter of 2022 following an increase of R26.5 billion in the third quarter.

22 The international liquidity position is calculated as the SARB's gross gold and foreign reserves *minus* foreign currency-denominated liabilities against both domestic and foreign counterparties *plus/minus* the forward position in foreign currency.

The value of South Africa's gross gold and other foreign reserves (i.e. the international reserves of the SARB before accounting for reserves-related liabilities), expressed in US dollar, increased from US$58.9 billion at the end of September 2022 to US$60.6 billion at the end of December. The increase was mainly due to a foreign loan received by national government and an increase in the US dollar price of gold. The country's gross gold and other foreign reserves increased further to US$61.0 billion at the end of February 2023. South Africa's international liquidity position[22] increased from US$52.2 billion at the end of September 2022 to US$53.8 billion at the end of December and further to US$54.1 billion at the end of February 2023.

International reserves




Source: SARB

The level of import cover (i.e. the value of gross international reserves relative to the value of merchandise imports as well as services and income payments) decreased from 5.1 months at the end of September 2022 to 4.9 months at the end of December.

23 Unless stated to the contrary, all percentage changes in this section are based on the end of the period.

## Exchange rates[23]

The NEER of the rand increased marginally by 0.8% in the fourth quarter of 2022 following decreases of 4.6% in the third quarter and 6.2% in the second quarter. Despite considerable volatility in the exchange value of the rand during 2022, the NEER decreased by only 0.1% from the end of 2021 to the end of 2022. However, major global currencies displayed significant divergence in 2022, with the rand depreciating by 6.4% and 0.7% against the US dollar and the euro respectively, and appreciating by 7.2%, 4.9% and 2.1% against the Japanese yen, the British pound and the Chinese yuan respectively.

The exchange value of the rand was negatively impacted by the effects of the severe electricity load-shedding on the domestic economic growth outlook which, in turn, influenced investor sentiment during the second half of 2022. However, the slowdown in consumer price inflation in the US tempered expectations of future interest rate increases and supported the exchange value of the rand against the US dollar for much of the fourth quarter of 2022. The NEER subsequently decreased by 6.8% from 31 December 2022 to 15 March 2023.

### Exchange rates of the rand

Percentage change

| | 31 Mar 2022 to 30 Jun 2022 | 30 Jun 2022 to 30 Sep 2022 | 30 Sep 2022 to 31 Dec 2022 | 31 Dec 2022 to 15 March 2023 |
|---|---|---|---|---|
| Weighted average* | -6.2 | -4.6 | 0.8 | -6.8 |
| Euro | -5.1 | -3.6 | -2.8 | -7.5 |
| US dollar | -11.0 | -9.2 | 5.4 | -6.8 |
| Chinese yuan | -6.0 | -3.8 | 3.3 | -7.5 |
| British pound | -3.8 | -1.7 | -2.0 | -7.6 |
| Japanese yen | -0.5 | -3.8 | -3.8 | -4.6 |

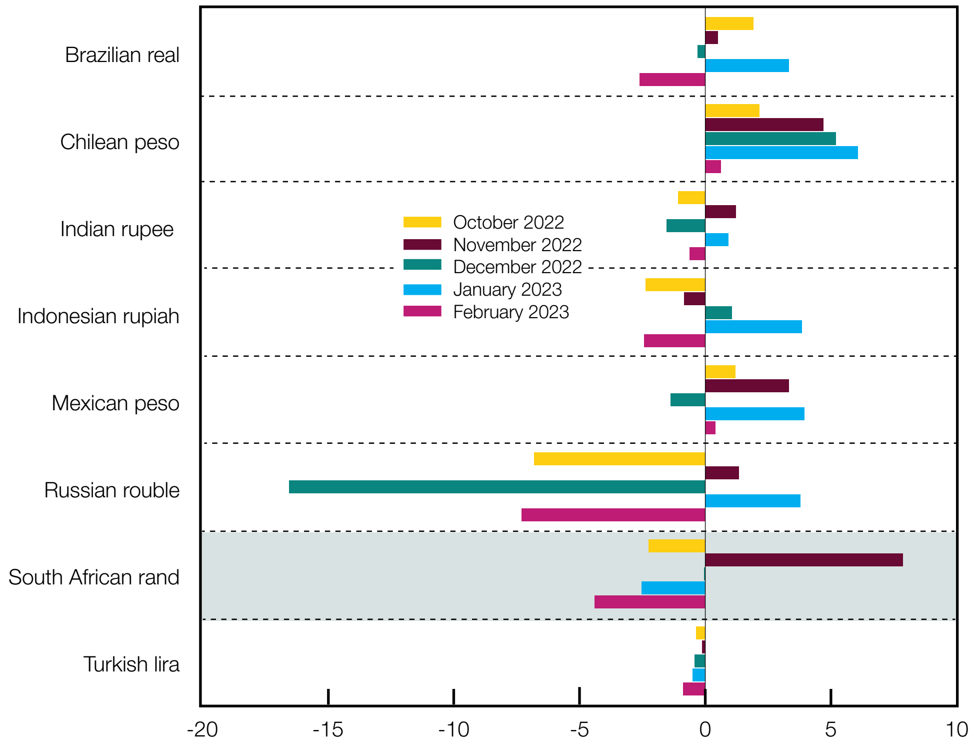
* Trade-weighted exchange rate against a basket of 20 currencies (nominal effective exchange rate)
Depreciation (-)/appreciation (+)

Source: SARB

Despite the ongoing electricity load-shedding, investors were somewhat appeased by the *2022 Medium-Term Budget Policy Statement (2022 MTBPS)*, which was generally well received. Several emerging market currencies strengthened against the US dollar in November 2022, with the rand appreciating by 7.9% against the US dollar and the NEER increasing by 4.7%. This reflected expectations of smaller US interest rate increases in future as consumer price inflation in that country surprised to the downside and increased speculation that China might ease its COVID-19 restrictions, which raised expectations of a less severe global economic slowdown. Domestically, the repurchase (repo) rate was increased by another 75 basis points in November 2022 as the SARB assessed the risks to the inflation outlook to be on the upside.

### Emerging market currencies against the US dollar*

Percentage change from month to month



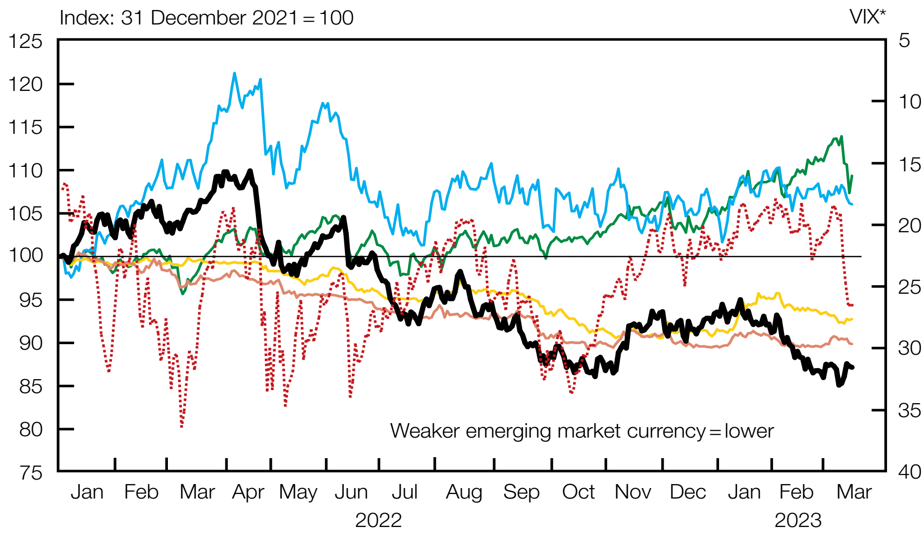

Depreciation (-)/appreciation (+)

* End of period

Sources: Refinitiv and SARB

The NEER decreased by 2.1% in December 2022 amid growing concerns of weaker global economic growth as well as persistent inflation in South Africa's major trading partners like the United Kingdom (UK) and Europe. While the Fed scaled down the magnitude of its monetary policy tightening, the Bank of England and the European Central Bank increased interest rates aggressively. Domestically, political uncertainty and electricity load-shedding continued to weigh on investor sentiment and the domestic economic outlook.

Emerging market currencies against the US dollar




* The Volatility Index (VIX) is a real-time index that represents the market's expectation of 30-day forward-looking volatility derived from the S&P 500 Index options and it was developed by the Chicago Board Options Exchange (CBOE). The VIX provides a measure of market risk and investor sentiment.

Sources: Refinitiv and SARB

While some emerging market currencies strengthened against the US dollar in January 2023, the rand depreciated by 2.5% as adverse domestic developments persisted and electricity load-shedding intensified. The rand was the worst-performing emerging market currency against the US dollar in the first 10 weeks of 2023, depreciating by 6.8% against the US dollar during the period. This initially reflected the continued weakness in the domestic economy and more

Effective exchange rates of the rand


Source: SARB

recently the downgrade of South Africa's sovereign credit rating outlook from positive to stable by Standard & Poor's (S&P) as well as increased global risk aversion amid fears of a possible banking crisis in the US and Europe.

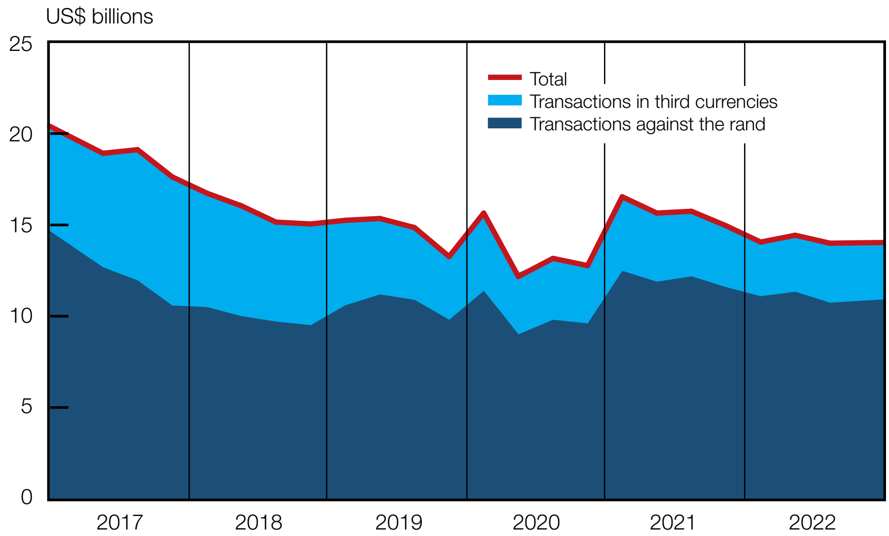
In contrast to the decrease in the NEER, the increase of 6.8% in the real effective exchange rate (REER) of the rand between December 2021 and December 2022 reduced the competitiveness of domestic producers in foreign markets. The recent divergence between the NEER and the REER can be attributed to a larger wholesale price inflation differential between South Africa and its main trading partners, which was not sufficiently countered by the decline in the NEER.

## Turnover in the South African foreign exchange market

Turnover in the South African foreign exchange (FX) market decreased further in the fourth quarter of 2022, extending the downward trend that started in early 2021. The net average daily turnover[24] decreased marginally from US$14.1 billion in the third quarter of 2022 to US$14.0 billion in the fourth quarter following a decrease of 3.0% in the previous quarter. The further decline could be attributed to investor sentiment being negatively impacted by continued electricity load-shedding amid political and economic uncertainty. Non-resident investors thus showed less appetite for South African financial assets during the fourth quarter of 2022, despite less risk aversion globally. In addition, the fourth quarter of each year generally reflects lower turnover due to the year-end holiday season. FX transactions against the rand increased marginally from US$10.7 billion in the third quarter of 2022 to US$10.9 billion in the fourth quarter. By contrast, transactions in third currencies decreased from US$3.4 billion to US$3.1 billion over the same period.

24 The net average daily turnover is calculated as the daily average of all new FX transactions concluded during a specified period, adjusted for domestic interbank double-counting.

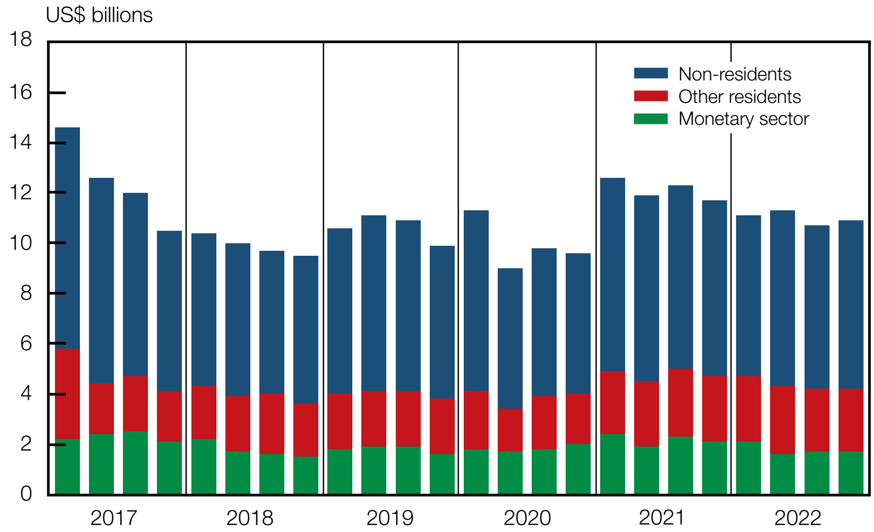
Net average daily turnover in the South African foreign exchange market




Source: SARB

Following a decrease to US$6.5 billion in the third quarter of 2022, average counterparty participation by non-residents in the rand market increased somewhat to US$6.7 billion in the fourth quarter. Monetary sector participation remained unchanged at an average of US$1.7 billion in the third and fourth quarter of 2022. Similarly, resident participation also remained unchanged at US$2.5 billion over the same period.

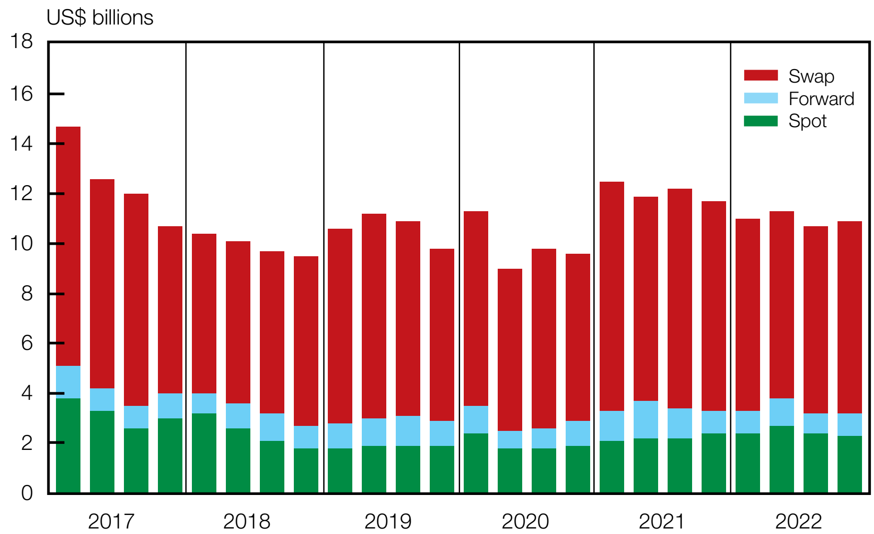
Composition of net average daily turnover in the South African foreign exchange market against the rand, by counterparty




Source: SARB

Swap transactions in the rand market increased from US$7.5 billion in the third quarter of 2022 to US$7.7 billion in the fourth quarter. Forward transactions increased slightly from US$0.8 billion to US$0.9 billion, while spot transactions decreased from US$2.4 billion to US$2.3 billion over the same period.

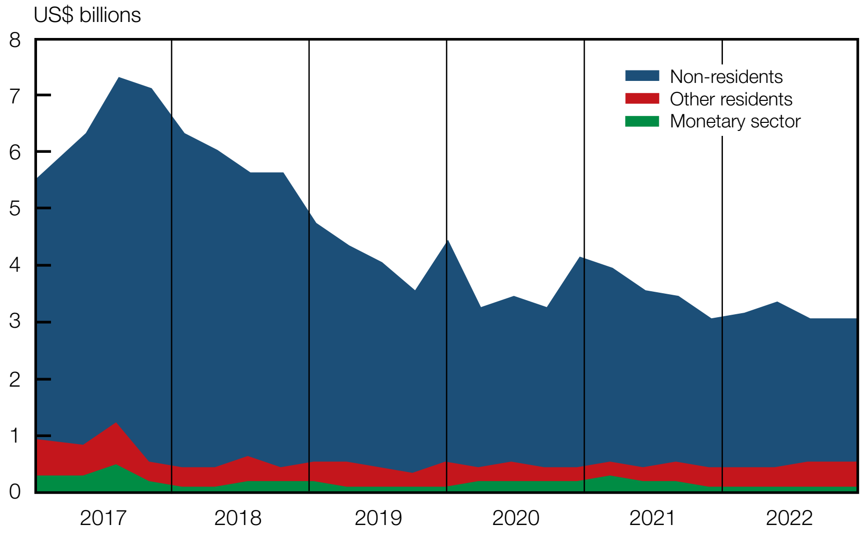
Composition of net average daily turnover in the South African foreign exchange market against the rand, by instrument




Source: SARB

The decrease in activity in the third-currency market was mainly due to lower participation by non-residents, which declined from US$3.0 billion in the third quarter of 2022 to US$2.6 billion in the fourth quarter. Contributions by both the monetary sector and residents remained relatively stable and averaged US$0.1 billion and US$0.4 billion respectively over the same period.

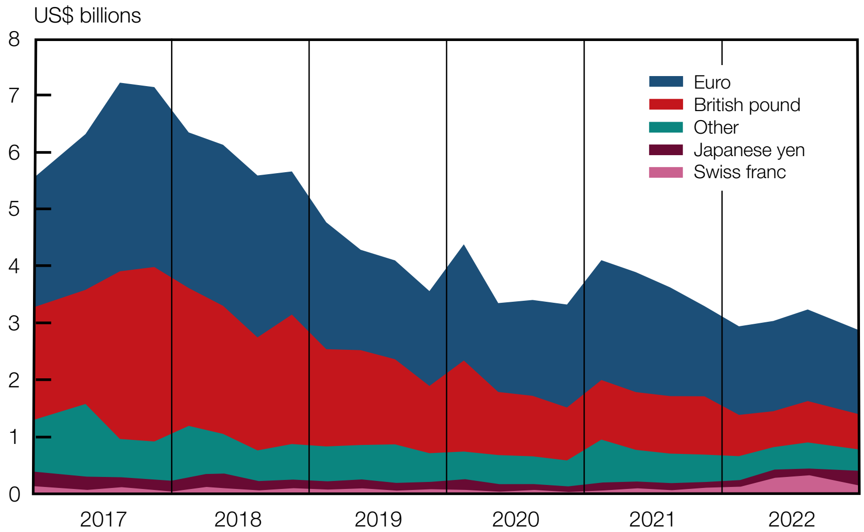
Composition of net average daily turnover in the South African foreign exchange market in third currencies, by counterparty




Source: SARB

In the market for third currencies, US dollar transactions against most other currencies declined, except against the Japanese yen, which increased from US$0.1 billion in the third quarter of 2022 to US$0.2 billion in the fourth quarter. US dollar transactions against the euro declined to US$1.5 billion in the fourth quarter of 2022 after remaining unchanged since the fourth quarter of 2021. Transactions of the US dollar against the Swiss franc declined from US$0.3 billion in the third quarter of 2022 to US$0.2 billion in the fourth quarter, while its transactions against the British pound decreased from an average of US$0.7 billion to US$0.6 billion over the same period. US dollar transactions against other currencies declined from US$0.5 billion to US$0.4 billion between the third and fourth quarter of 2022.

Composition of net average daily turnover in the South African foreign exchange market in third currencies, by US dollar against foreign currencies



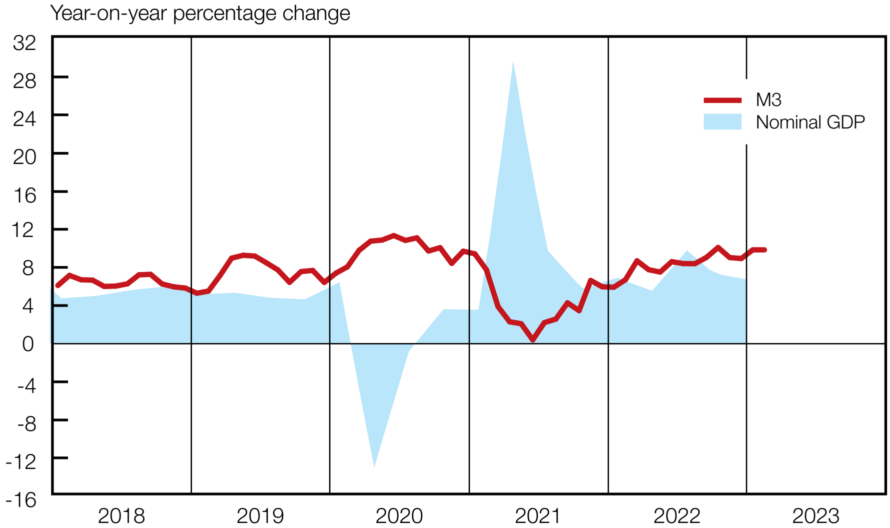

Source: SARB

# Monetary developments, interest rates and financial markets

## Money supply

Growth in the broadly defined money supply (M3) moderated slightly to 9.6% in January 2023 from 9.8% in October 2022 following an acceleration from 5.7% in January 2022. The buoyant growth in M3 during the latter part of 2022 was boosted by the corporate sector, particularly financial companies, while growth in household deposits levelled off. The annual average rate of increase in M3 doubled from 4.0% in 2021 to 8.0% in 2022 but was still below the 9.6% average of 2020 at the height of the COVID-19 pandemic. The quarter-to-quarter seasonally adjusted and annualised increase in M3 accelerated from 8.8% in the third quarter of 2022 to 11.3% in the fourth quarter – the highest rate of increase since the second quarter of 2020. The income velocity of M3 decreased from 1.48 in the third quarter of 2022 to 1.43 in the fourth quarter as growth in M3 exceeded that in nominal GDP.

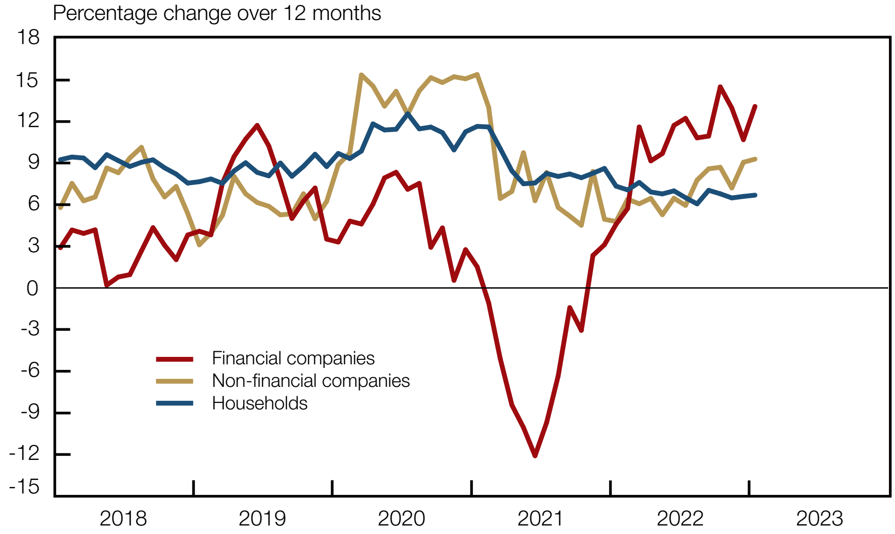
Money supply and gross domestic product




Sources: Stats SA and SARB

Growth in the deposit holdings of financial companies was especially robust at double-digit rates in the second half of 2022, partly recovering from the low base in 2021 as well as the high dividend payments by listed non-financial companies in the first and third quarters of 2022. Subsequently, growth in the deposit holdings of financial companies moderated from 14.5% in October 2022 to 13.1% in January 2023. Growth in the deposits of non-financial companies also accelerated from 4.8% in January 2022 to 9.3% in January 2023. By contrast, growth in the deposit holdings of the household sector fluctuated lower from 7.3% in January 2022 to 6.7% in January 2023. This likely reflected the impact of elevated food and fuel prices as well as the higher debt repayment burden amid rising interest rates and weak employment prospects.

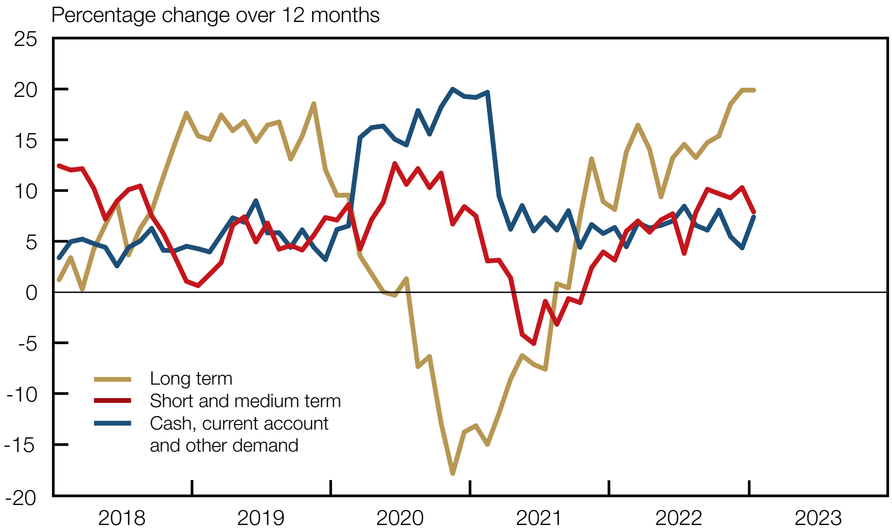
Deposit holdings of households and companies




Source: SARB

In 2022, growth in long-term deposits outpaced that in all the other categories as it accelerated from 8.1% in January 2022 to 19.9% in both December 2022 and January 2023. Growth in short- and medium-term deposits averaged 7.3% in 2022, accelerating gradually from 3.2% in January to 10.3% in December, but then it moderated to 7.9% in January 2023. The rate of increase in cash, current account and other demand deposits initially accelerated from 6.4% in January 2022 to 8.5% in July before decelerating to 4.4% in December. Subsequently, growth in the most liquid deposit category accelerated once again to 7.4% in January 2023.

Deposits by maturity




Source: SARB

The corporate sector's deposit holdings increased by R42.9 billion in the fourth quarter of 2022 compared with an increase of R37.2 billion during the same period in 2021. Financial companies' deposit holdings decreased by R8.8 billion in the fourth quarter of 2022, almost double the decrease recorded in the same period in 2021. By contrast, non-financial companies' deposit holdings increased by R51.6 billion in the final quarter of 2022. The household sector's deposit holdings increased by R21.4 billion in the fourth quarter of 2022, less than the increase of R26.8 billion in the fourth quarter of 2021.

M3 holdings of households and companies

| | Year-on-year change (R billions) | | | | | Percentage of total M3 deposit holdings* |
|---|---|---|---|---|---|---|
| | 2021 | 2022 | | | | |
| | Q4 | Q1 | Q2 | Q3 | Q4 | |
| Households | 26.8 | -1.7 | 30.2 | 57.6 | 21.4 | 36.7 |
| Companies: Total | 37.2 | 116.1 | -49.0 | 159.2 | 42.9 | 63.3 |
| *Of which*: Financial | -4.5 | 93.2 | -31.6 | 95.4 | -8.8 | 32.5 |
| Non-financial | 41.8 | 23.0 | -17.4 | 63.9 | 51.6 | 30.8 |
| **Total M3 deposits** | **64.0** | **114.5** | **-18.8** | **216.9** | **64.3** | **100.0** |

* Expressed as a percentage of the total outstanding balance as at December 2022

Source: SARB

From a statistical perspective, the counterparts to the increase of R64.3 billion in M3 in the fourth quarter of 2022 were increases in net other assets of R92.5 billion, net claims on the government sector of R8.7 billion and claims on the domestic private sector of R7.9 billion. These increases were partly countered by a decline of R44.8 billion in the monetary sector's net foreign assets.

Counterparts of change in M3

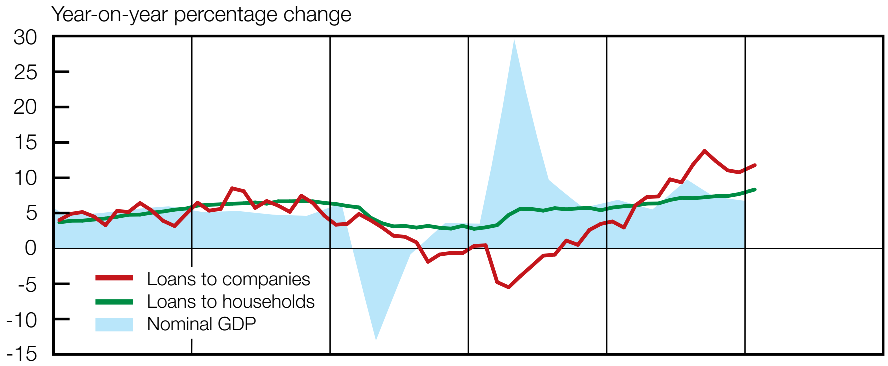
| | Quarterly change (R billions) | | | | |
|---|---|---|---|---|---|
| | 2021 | 2022 | | | |
| | Q4 | Q1 | Q2 | Q3 | Q4 |
| Claims on the private sector | 82.5 | 103.7 | 71.9 | 133.4 | 7.9 |
| Net claims on the government sector | 3.8 | 76.7 | -113.6 | 140.1 | 8.7 |
| Net foreign assets | 16.6 | -128.4 | 91.3 | 12.3 | -44.8 |
| Net other assets | -38.9 | 62.4 | -68.5 | -69.0 | 92.5 |
| **Change in M3** | **64.0** | **114.5** | **-18.8** | **216.9** | **64.3** |

Source: SARB

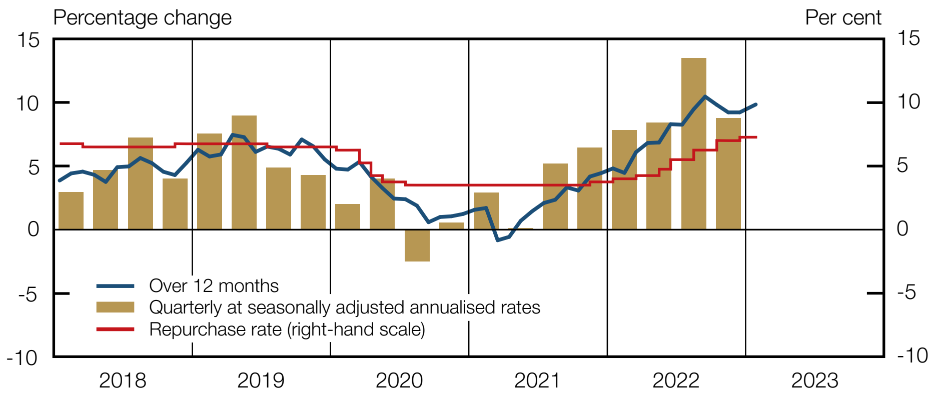
## Credit extension

Growth in total loans and advances extended by monetary institutions to the domestic private sector accelerated from 4.8% in January 2022 to a high of 10.5% in September before moderating slightly to 9.7% in January 2023. Following a few years of tepid growth in credit extension, annual average growth accelerated to 7.8% in 2022 – the highest since 2015 – due to base effects and a recovery in the demand for credit after the COVID-19-related slowdown. The quarter-to-quarter seasonally adjusted and annualised growth in total loans and advances to the domestic private sector accelerated from 7.8% in the first quarter of 2022 to 13.5% in the third quarter before decelerating to 8.8% in the fourth quarter. Despite the recent deceleration in credit extension, it still exceeded growth in nominal GDP, resulting in an increase in the ratio of total loans and advances to GDP to 60.3% in the fourth quarter of 2022 from 58.6% in the third quarter.

Bank loans and gross domestic product



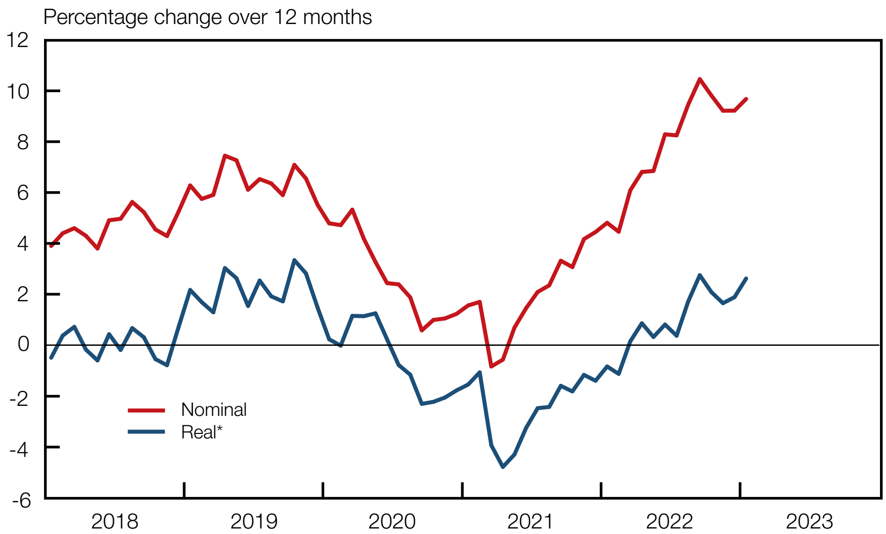

Total loans and advances to the private sector




Sources: Stats SA and SARB

Strong credit demand is reflected by the acceleration in growth in total loans and advances, adjusted for inflation, to a post-pandemic high of 2.8% in September 2022 following a persistent contraction between July 2020 and February 2022. Subsequently, growth in real loans and advances slowed to 1.9% in December 2022 before once again accelerating to 2.6% in January 2023.

Total loans and advances




* Deflated with the headline consumer price index

Source: SARB

Credit extended to the corporate sector increased by only R10.2 billion in the fourth quarter of 2022, much less than the increases of R64.4 billion and R96.6 billion in the second and third quarter respectively. However, for the year as a whole, the corporate sector's utilisation of bank funding increased by a record-high R199.4 billion, which was substantially more than the increase of R62.2 billion in 2021. Non-financial companies took up the bulk of the credit, mostly in general loans, amid the increase in economic activity and renewable energy projects in 2022. Credit extension to the household sector increased by a record R145.4 billion in 2022, much more than the R96.9 billion in 2021. Mortgage advances to households accounted for the bulk of the increase in 2022, followed by significant contributions by instalment sale credit and general loans. The latter increased by R24.6 billion in 2022, close to its pre-COVID-19 increase of R25.7 billion in 2019.

Credit extended to households and companies

| | Quarter-on-quarter change (R billions) | | | | | Year-on-year change (R billions) | | Percentage of total loans and advances* |
|---|---|---|---|---|---|---|---|---|
| | 2021 | 2022 | | | | 2021 | 2022 | |
| | Q4 | Q1 | Q2 | Q3 | Q4 | | | |
| Households ................................... | 29.4 | 40.0 | 29.6 | 35.4 | 40.4 | 96.9 | 145.4 | 49.8 |
| Companies: Total............................ | 58.2 | 28.2 | 64.4 | 96.6 | 10.2 | 62.2 | 199.4 | 50.2 |
| *Of which*: Financial ..................... | 8.4 | -6.5 | 14.1 | 43.2 | -20.1 | -3.0 | 30.6 | 11.7 |
| Non-financial............... | 49.8 | 34.8 | 50.3 | 53.4 | 30.4 | 65.2 | 168.8 | 38.5 |
| **Total bank loans and advances ....** | **87.6** | **68.3** | **94.0** | **131.9** | **50.6** | **159.1** | **344.8** | **100.0** |

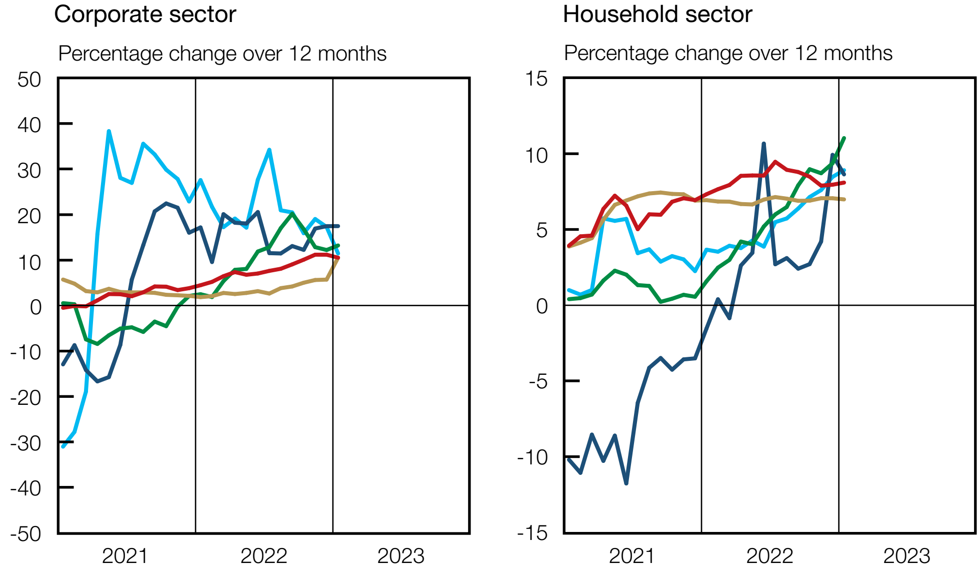
* Expressed as a percentage of the total outstanding balance as at December 2022

Source: SARB

Growth in general loans to companies (54.0% of their total loans) rebounded from a contraction in 2021 to 20.2% in September 2022. This reflected base effects and the funding of the fifth bid window of the Renewable Energy Independent Power Producer Procurement Programme. Subsequently, growth in general loans to companies slowed to 13.2% in January 2023 as the increased frequency of electricity load-shedding affected investor confidence. Growth in mortgage advances (27.0% of their total loans) accelerated steadily throughout 2022 to 6.4% in January 2023. Growth in instalment sale credit to companies (8.2% of their total loans) accelerated from 4.5% in January 2022 to 10.5% in January 2023 amid robust purchases of trucks, buses and other commercial vehicles. Credit card advances (less than 0.5% of their total loans) decelerated from a high of 34.3% in July 2022 to 11.4% in January 2023. The utilisation of overdrafts (10.4% of their total loans) remained buoyant as it grew at double-digit rates throughout 2022 and in January 2023.

Growth in credit extension to the household sector accelerated gradually from 5.8% in January 2022 to 7.9% in January 2023. However, most of the growth occurred in unsecured credit (23.6% of households' total loans), with general loans (14.3% of their total loans) accelerating from 1.6% in January 2022 to 11.0% in January 2023, although it should be noted that a reclassification of data from companies to households affected the comparability of the earlier statistics with January 2023. Likewise, growth in credit card advances (7.0% of households' total loans) accelerated from 3.7% to 8.9% over the same period, while overdrafts (2.3% of their total loans) accelerated to 8.6% in January 2023. Growth in asset-backed credit (76.4% of their total loans) was more subdued, with instalment sale credit (17.6% of their total loans) fluctuating around an average rate of 8.3% in 2022 and amounting to 8.0% in January 2023. Growth in mortgage advances (58.8% of total loans to households) averaged 6.9% in 2022 and was 7.0% in January 2023.

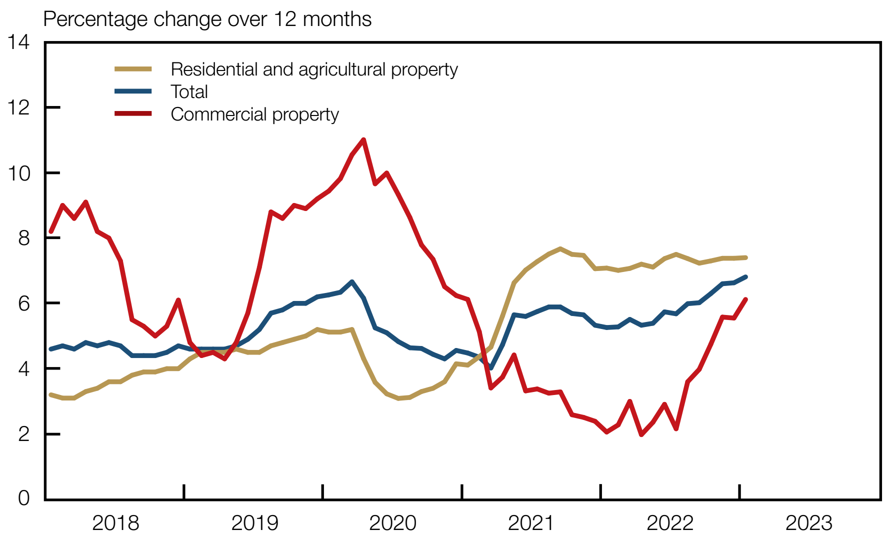
## Selected loans and advances




Source: SARB

The outstanding balance of mortgage advances on commercial property increased by R26.5 billion in 2022, more than double the increase of R11.1 billion in 2021 and closer to pre-pandemic increases. The transition to hybrid ways of work likely encouraged the repurposing of existing properties and the development of shared working spaces. Nonetheless, the year-on-year growth of 6.1% in January 2023 was still significantly below the recent high of 11.0% recorded in April 2020. Growth in mortgage advances on residential and agricultural properties has levelled off at around 7.0% since the second half of 2021. However, there has been a noticeable decline in new applications for such mortgage advances in recent months.

## Mortgage advances



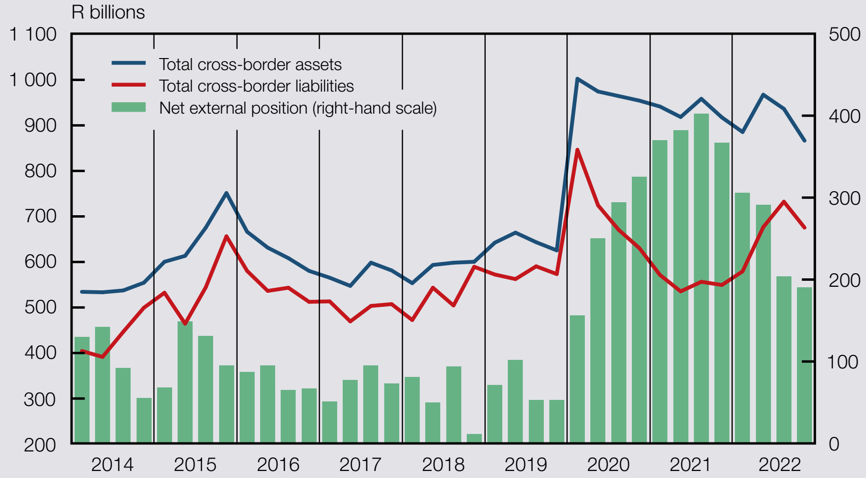

Source: SARB

## Box 1 The cross-border banking landscape[1] in South Africa since the onset of COVID-19

The aggregate cross-border activity of South African banks[2], although small[3] in comparison to the overall level of international banking activity as measured by the Bank for International Settlements (BIS), renders informative statistics to assess structural changes and associated risks such as those that have materialised since the onset of the coronavirus disease 2019 (COVID-19) pandemic. This box analyses these structural changes and underlying drivers since the onset of the pandemic.

A period of fairly stable cross-border assets and liabilities[4] was halted by COVID-19 as both increased to unprecedented levels in the first quarter of 2020 when, among other factors, the depreciation of the exchange value of the rand affected the value of foreign asset holdings and derivative contracts.[5] Thereafter, the value of cross-border assets remained elevated despite decreasing slightly in recent quarters, while the value of cross-border liabilities declined relatively quickly to pre-COVID-19 levels. The divergent movements between these assets and liabilities led to a record-high positive net external position[6] of R402 billion in September 2021 compared with an average of R66 billion for the eight quarters between March 2018 and December 2019. The positive net external position narrowed to R190 billion in December 2022 due to the subsequent increase in the value of liabilities from the second quarter of 2022. This was mostly related to an increase in the value of swap[7] and forward derivative[8] positions due to exchange rate movements as well as increases in call[9] and fixed[10] deposits and repurchase agreements.[11]

### Cross-border position of South African banking sector




Source: SARB

The currency composition of cross-border assets and liabilities exposes such holdings to movements in the exchange value of the rand versus other currencies. In terms of foreign currency, the United States (US) dollar dominates both cross-border assets and cross-border liabilities. However, the total cross-border liabilities are dominated by the rand, which reduces exposure to currency movements. This partly explains the much larger increase in the value of cross-border assets than liabilities following the significant depreciation in the exchange value of the rand at the onset of the COVID-19 pandemic. Subsequently, the value of cross-border assets was further supported by, among other factors, measures by the South African Reserve Bank (SARB)

1 This box relates to the locational banking statistics published on pages S–26 and S–27 in this edition of the *Quarterly Bulletin.*

2 'South African banks' refers to banks registered under the Banks Act 94 of 1990 and includes registered local or foreign-controlled domestic private sector banks as well as the South African branches and subsidiaries of foreign banks. Mutual banks are excluded due to lack of cross-border activity.

3 The cross-border assets (claims) of most developed countries are approximately a third of total assets, on average, while the South African banking sector's cross-border assets and liabilities only average 13% and 10% respectively.

4 These are positions with non-resident counterparties, for example an asset (claim) or a liability against a counterparty located in a country other than South Africa.

5 A depreciation in the exchange value of the rand affects foreign asset holdings more than foreign liability holdings as a larger part of foreign assets is denominated in foreign currency than foreign liabilities.

6 The net external position is calculated as cross-border assets *minus* cross border-liabilities.

7 Swaps are financial over-the-counter (OTC) agreements between two parties who agree to exchange, over time and according to predetermined rules, streams of payment on an agreed notional principal amount.

8 Forwards are financial OTC agreements under which two counterparties agree to exchange a specified quantity of an underlying financial instrument at an agreed contract price (the 'strike' price) on a specified date.

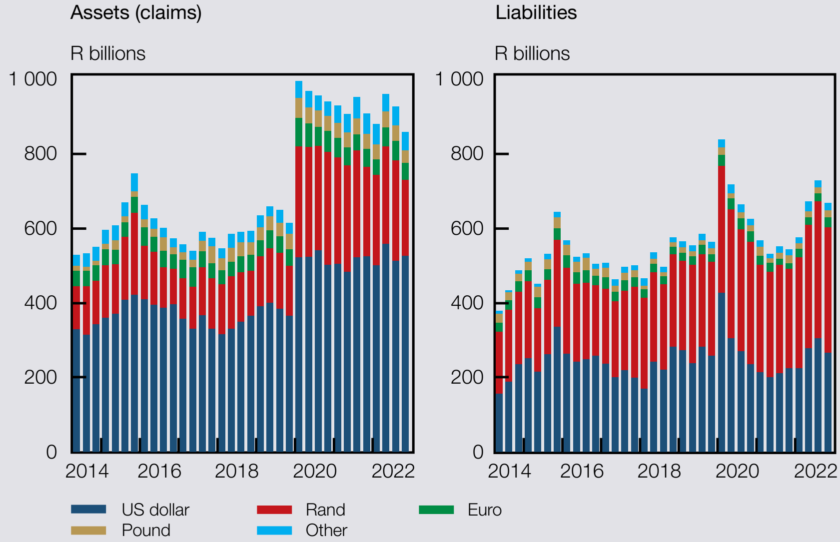
9 Call deposits have no restrictions, no fixed investment period and no notice period; they are not used to make third-party payments.

10 Fixed-term deposits have maturities ranging from one month to several years. When a fixed-term deposit is set, the funds can only be withdrawn after the term has ended or by giving a predetermined number of days' notice. If called up before the agreed term, the holder is charged a penalty.

11 Repurchase agreements are contractual arrangements involving the sale of securities for cash, at a specified price, with a commitment to repurchase the same or similar securities at a fixed price either on a specified future date or with an 'open' maturity.

to reduce the impact of the inflow of funds from the International Monetary Fund (IMF) and the World Bank in support of COVID-19 relief on domestic money market liquidity. The increase in cross-border assets of the South African banking sector reflected foreign exchange swaps by the SARB, which increased the US dollar liquidity of South African banks. Some of this excess liquidity was channelled into foreign investments by South African banks.[12]

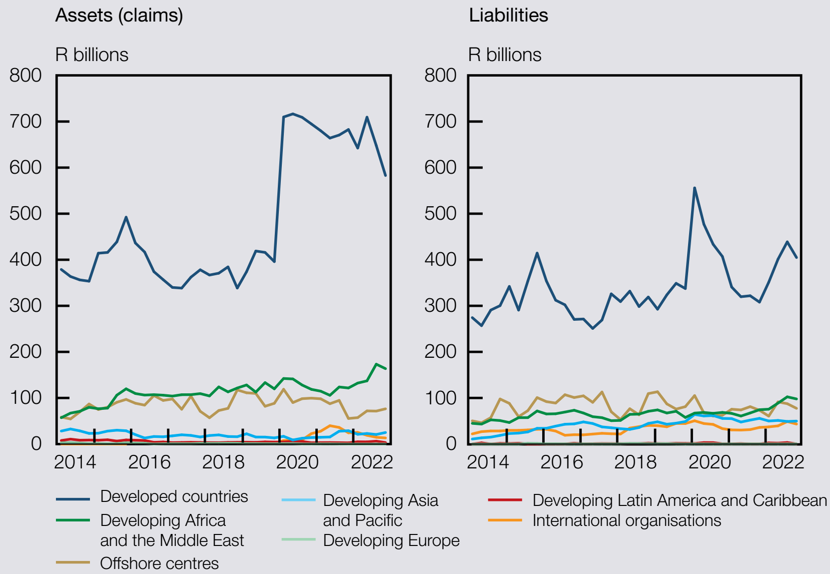
### Currency composition of cross-border assets and liabilities




Source: SARB

Globally, the banking sector's cross-border assets (claims) surged during the COVID-19 pandemic as banks in most countries placed assets in developed countries, in particular the US and the United Kingdom (UK), and predominantly in the US dollar, according to the BIS.[13] Similarly, South African banks recorded a substantial increase in the value of cross-border assets placed in the US and UK, while exposure to Developing Africa and Middle East, the second-most prominent counterparty region, remained fairly stable, with Nigeria being the largest counterparty country. During the pandemic, South African banks' cross-border activity with the Developing Asia and Pacific region also increased, in particular with China.

### Regional counterparty composition of cross-border assets and liabilities




Source: SARB

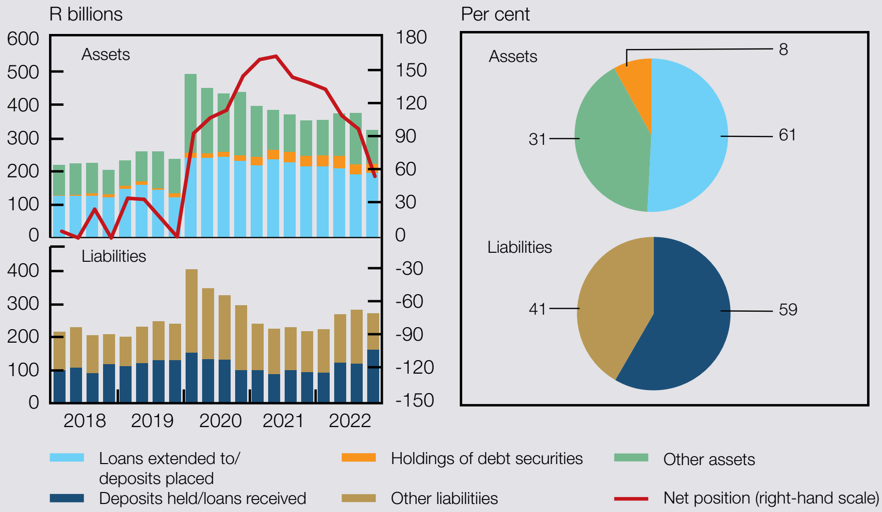
12 These foreign investments included Treasury bills of the US, Europe and the UK, as well as Canadian sovereigns and the placement of deposits with non-resident banks.

13 See https://www.bis.org/statistics/rppb2007.pdf

South African banks' largest cross-border exposure in terms of both assets (claims) and liabilities to a single jurisdiction is against the UK, with positions held mostly in the US dollar. As a prominent international banking hub, a large share of this reflects activity of banks from other countries with affiliates in the UK. South African banks' cross-border assets (claims) and liabilities with the UK amounted to R324 billion and R270 billion respectively at the end of December 2022. A fairly balanced and, at times, negative net external position with the UK turned into a significant positive net external position at the onset of COVID-19 before it deteriorated gradually although not returning to pre-COVID-19 levels.

South African banks' cross-border exposure against the UK*

Distribution as at December 2022



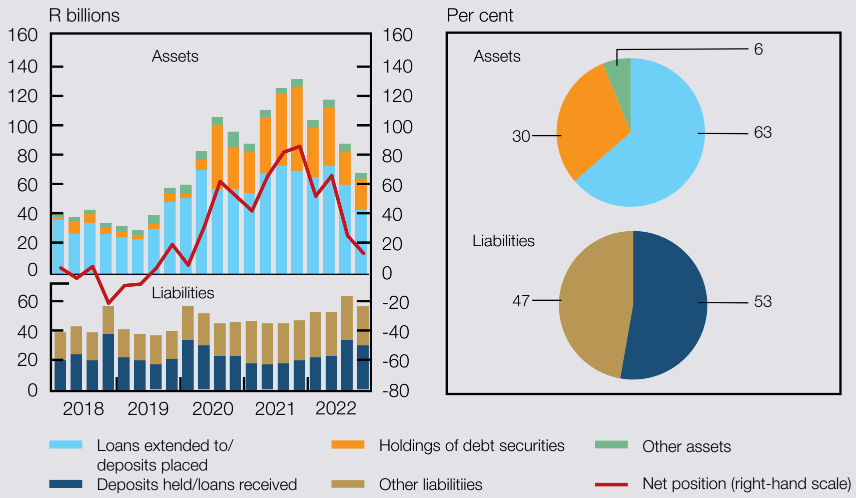

Source: SARB

* Holdings of debt securities issued by South African banks are not available per counterparty region as the identification of current holders is challenging, especially if the securities are held via custodians and are actively transacted in financial markets.

South African banks' second-largest counterparty exposure in terms of both assets (claims) and liabilities is with the US, with the asset position increasing significantly since the start of the COVID-19 pandemic. More recently, the value of cross-border US assets decreased to R70.0 billion, with liabilities amounting to R57.0 billion at the end of December 2022.

South African banks' cross-border exposure against the US*

Distribution as at December 2022

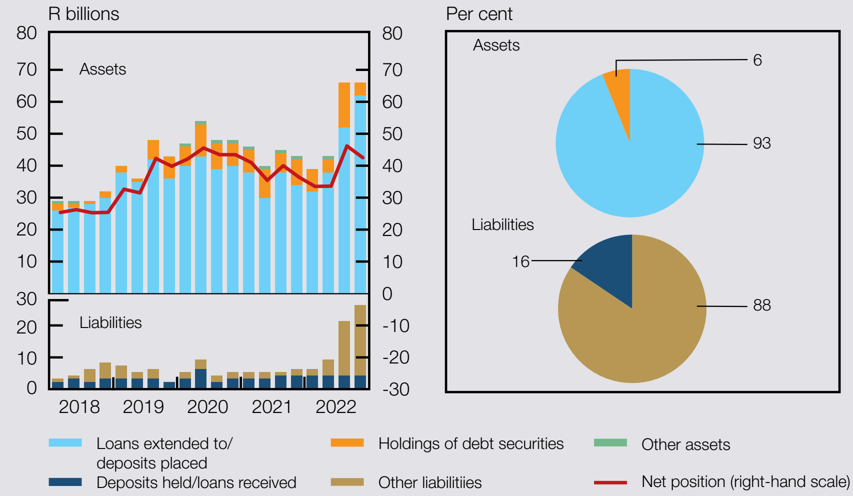



Source: SARB

* Holdings of debt securities issued by South African banks are not available per counterparty region as the identification of current holders is challenging, especially if the securities are held via custodians and are actively transacted in financial markets.

The elevated level of total cross-border assets (claims) against both the UK and the US since the onset of COVID-19 mostly reflected loans extended to and/or deposits placed with foreign banks, increases in inter-office positions[14] as well as increased holdings of foreign debt securities. South African banks placed funds with highly rated foreign banks, which increased their nostro[15] balances, and as collateral placements and investments in high-quality liquid assets (HQLA)[16] such as foreign Treasury bills and bonds.

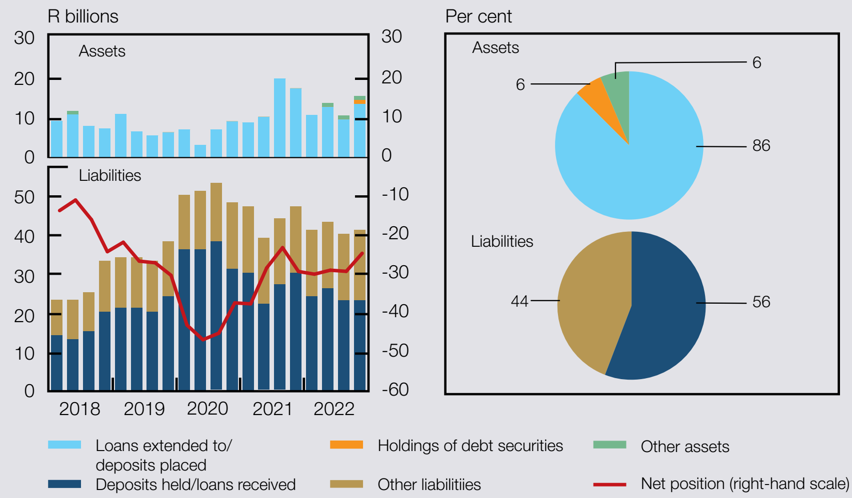
**South African banks' cross-border exposure against Nigeria*** | **Distribution as at December 2022**




Source: SARB

* Holdings of debt securities issued by South African banks are not available per counterparty region as the identification of current holders is challenging, especially if the securities are held via custodians and are actively transacted in financial markets.

**South African banks' cross-border exposure against China*** | **Distribution as at December 2022**




Source: SARB

* Holdings of debt securities issued by South African banks are not available per counterparty region as the identification of current holders is challenging, especially if the securities are held via custodians and are actively transacted in financial markets.

---

14 Inter-office positions are all positions between any combination of the parent bank and its relevant branches or subsidiaries, including positions vis-à-vis relevant subsidiaries in South Africa but excluding inter-branch transactions between different offices of a bank in South Africa.

15 A nostro account refers to an account that a South African bank holds in a foreign currency in a foreign bank.

16 HQLA are assets that can easily and immediately be converted into cash at little or no loss of value. The liquidity coverage ratio (LCR) requirement under the Basel III regulations requires banks to hold HQLA sufficient to cover 100% of their stressed net cash requirements over 30 days.

South African banks' growing positive net external position with Nigeria moderated at the onset of COVID-19. This has changed more recently as South Africa's positive net external position began to increase again in the aftermath of the COVID-19 pandemic. This partly reflected the expansion of South African-domiciled multinationals into Africa. The South African banking sector's cross-border assets (claims) against Nigeria mainly reflected loans extended to and deposits placed with Nigerian banks at an average of 93% of total cross-border assets against Nigeria between the first quarter of 2020 and the fourth quarter of 2022.

South African banks' cross-border assets generally exceed their cross-border liabilities in the case of most countries. However, China is one of the few countries with which South African banks have a negative net external position. This is mainly due to inter-office positions of two domestic branches of prominent Chinese-domiciled banks. Most of the noticeable increases in cross-border assets in China towards the latter part of 2021 were due to the depreciation in the exchange value of the rand as well as increases in syndicated term loans.

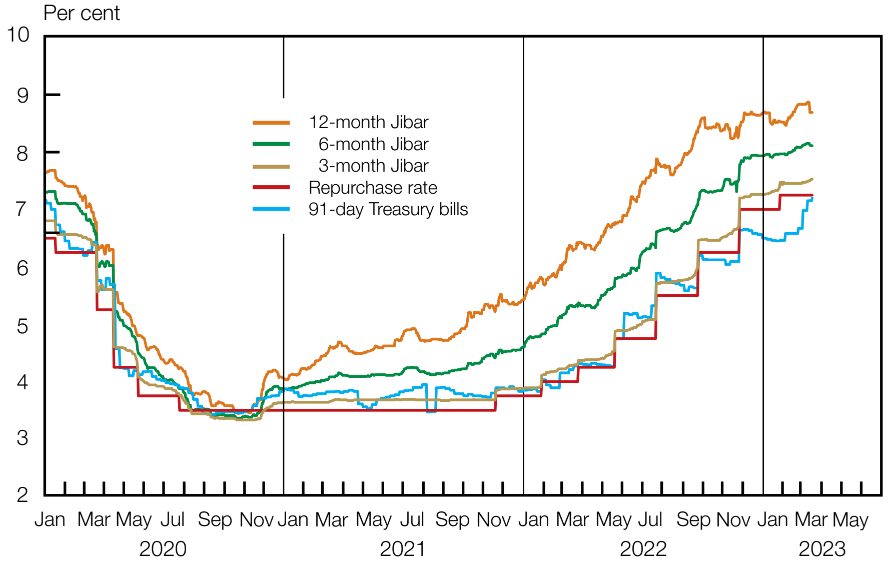
## Interest rates and yields

The Monetary Policy Committee (MPC) of the SARB continued to tighten monetary policy by increasing the repo rate by a further 25 basis points to 7.25% in January 2023. The MPC noted upside risks to the inflation outlook, emanating especially from elevated domestic food and electricity prices as well as the continuation of the war in Ukraine.

Domestic short-term money market interest rates trended moderately higher during the last quarter of 2022 and into the first quarter of 2023, in tandem with the increase in the repo rate, while also responding to inflation and reflecting fluctuations in the exchange value of the rand. The three-month Johannesburg Interbank Average Rate (Jibar) increased by 25 basis points from 7.20% on 1 December 2022 to 7.45% on 3 February 2023, matching the change in the repo rate. Subsequently, this rate increased further to 7.52% on 15 March 2023 amid expectations of a further increase in the repo rate. The six-month Jibar followed a similar trend, although increasing by only 13 basis points from 7.84% on 1 December 2022 to 7.97% on 31 January 2023, followed by a further increase to 8.11% on 15 March 2023. By contrast, movements in the longer-dated 12-month Jibar were much more subdued, decreasing marginally from 8.56% on 1 December 2022 to 8.52% at the end of January 2023, and remained around that level up to mid-February. The rate then increased to 8.83% from late February following the greylisting of South Africa by the Financial Action Task Force (FATF), but subsequently decreased again to 8.69% on 15 March.

The decrease in the tender rate on 91-day Treasury bills (TBs) of 19 basis points from 6.65% on 1 December 2022 to 6.46% on 31 January 2023 reflected heightened demand for short-term high-quality liquid assets (HQLA) to meet the Basel III-related liquidity coverage ratio requirement. With limited supply, unsuccessful bidders kept the demand up, hence the lower rate. The demand was subsequently partially met through the issuance of a further R1.8 billion of TBs across the full maturity spectrum on 10 February 2023 to raise funds to assist with the coupon payments on government bonds. The increased supply subsequently resulted in the tender rate on 91-day TBs increasing to 7.15% on 15 March 2023.

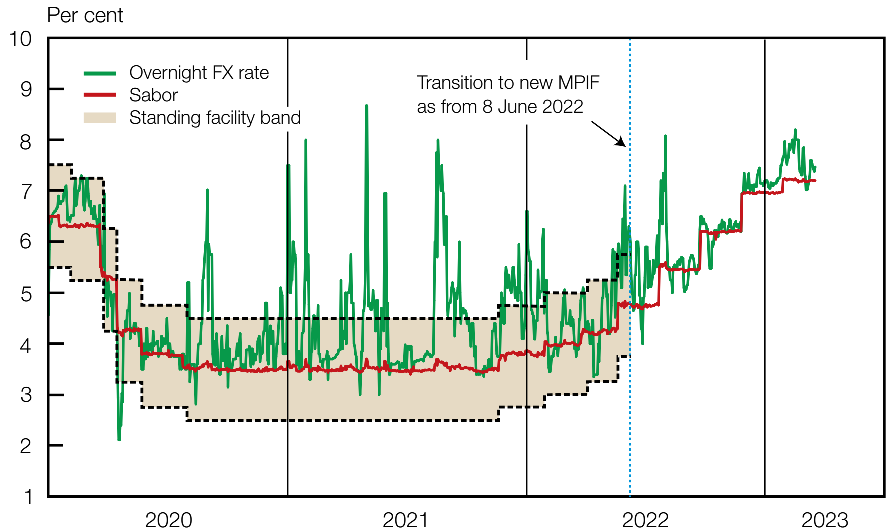
## Money market rates




Source: SARB

The South African Benchmark Overnight Rate (Sabor) remained closely aligned to the repo rate, increasing from 6.96% on 1 December 2022 to 7.23% on 31 January 2023 and fluctuating broadly sideways up to 15 March. The more volatile overnight FX rate initially increased from 7.00% on 1 December 2022 to 7.97% on 30 January 2023, affected by the increase in the repo rate and high month-end demand for liquidity. Subsequently, the overnight FX rate fluctuated between 7.52% on 2 February and 8.20% on 15 February in accordance with lower and higher demand for rand liquidity by foreign banks in the FX market before decreasing to 7.42% on 15 March. The overnight FX rate averaged 6.58% in the fourth quarter of 2022, up from 5.77% in the third quarter.

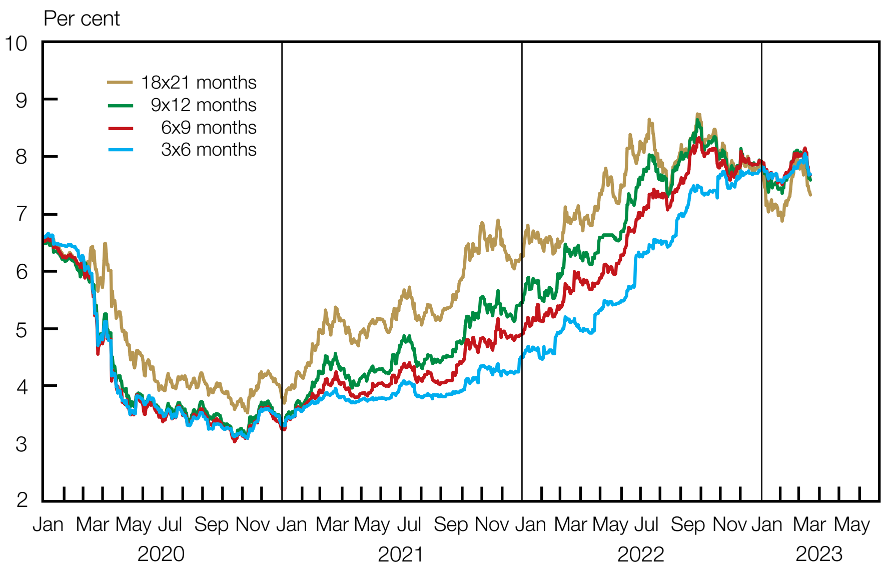
## Benchmark overnight rates




Source: SARB

Interest rates on forward rate agreements (FRAs) generally trended lower from December 2022, affected by fluctuations in the exchange value of the rand and expectations of lower inflation over the medium to longer term. The 3x6-month FRA decreased from 7.75% on 1 December 2022 to 7.59% on 31 January 2023 before increasing to 7.68% on 15 March in anticipation of a further increase in the repo rate at the March MPC meeting. The 6x9-month FRA decreased by 52 basis points from 8.09% on 1 December 2022 to 7.57% on 31 January 2023 before stabilising at around 7.99% between 16 February and 15 March. Likewise, the 9x12-month FRA levelled off at around 7.98% in the first half of March 2023.

Forward rate agreements



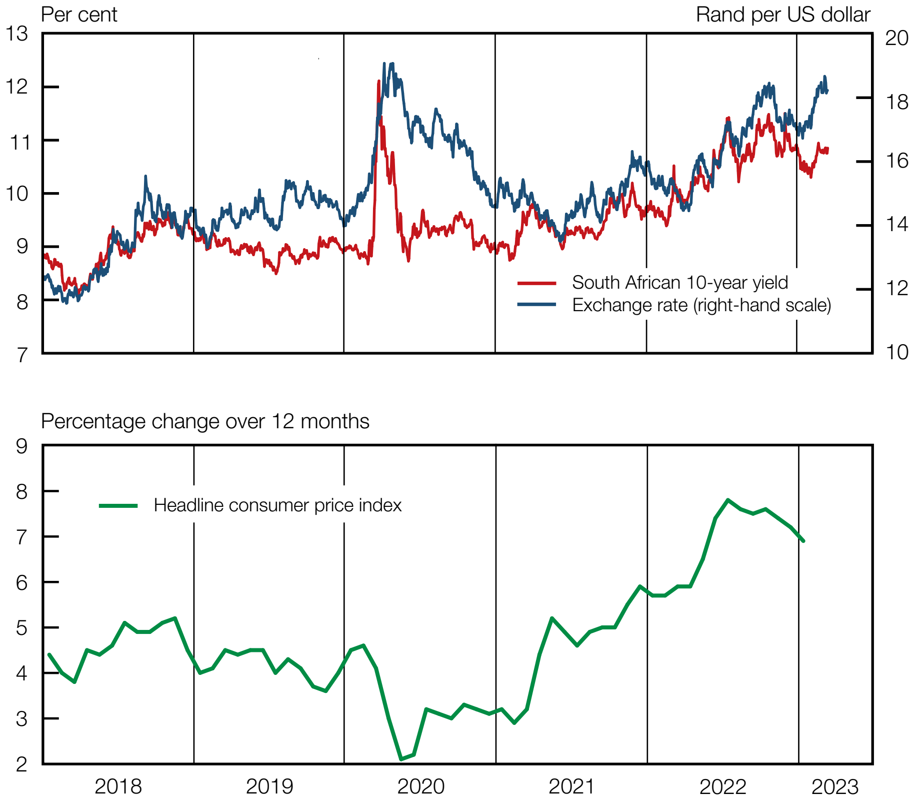

Source: SARB

The weighted average monthly flexible deposit and lending rates offered by private sector banks generally followed the trajectory of the recent changes in the repo and prime lending rates. The rate on mortgage advances increased from 9.84% in November 2022 to 10.43% in January 2023. Likewise, the rate on instalment sale credit increased from 10.74% to 10.94% between November 2022 and January 2023, while the rate on overdrafts increased from 10.55% to 11.11% over the same period. The rate charged on credit card advances rose by 13 basis points from 16.64% in November 2022 to 16.77% in January 2023. The interest rate on call deposits increased from 6.40% in November 2022 to 6.92% in January 2023. Likewise, the rate on 12-month fixed deposits increased to 7.45% in January 2023 from 6.98% in November 2022, while the rate on current accounts increased from 3.39% to 3.58% over the same period.

*South African rand-denominated government bonds issued and traded in the domestic market* increased during most of 2022. This reflected the impact of the war in Ukraine on global inflation and the concomitant monetary policy tightening as well as domestic factors such as higher inflation, the weaker exchange value of the rand and the impact of intensified electricity load-shedding on domestic economic activity. The yield on 10-year government bonds increased by 212 basis points from 9.38% on 17 February 2022 to 11.50% on 1 December before ending the year at 10.84% – 119 basis points higher than at the end of 2021. In comparison, global emerging market bond yields, measured by the iBoxx Global Government Emerging Markets Index[25], increased by only 45 basis points from the end of 2021 to 3.82% at the end of 2022. Subsequently, the yield on 10-year government bonds decreased to 10.29% on 2 February 2023 as it followed the lower domestic headline consumer price inflation and against the backdrop of an expected slower pace of increase in interest rates in the United States (US), before increasing to 10.84% on 15 March along with the depreciation in the exchange value of the rand.

25 The iBoxx Global Government Emerging Markets Index reflects the performance of emerging markets' local currency-denominated investment-grade sovereign debt. The index aims to offer a broad coverage of investment-grade emerging market sovereign bonds with minimum standards of investability and liquidity.

Government bond yield, exchange rate and inflation

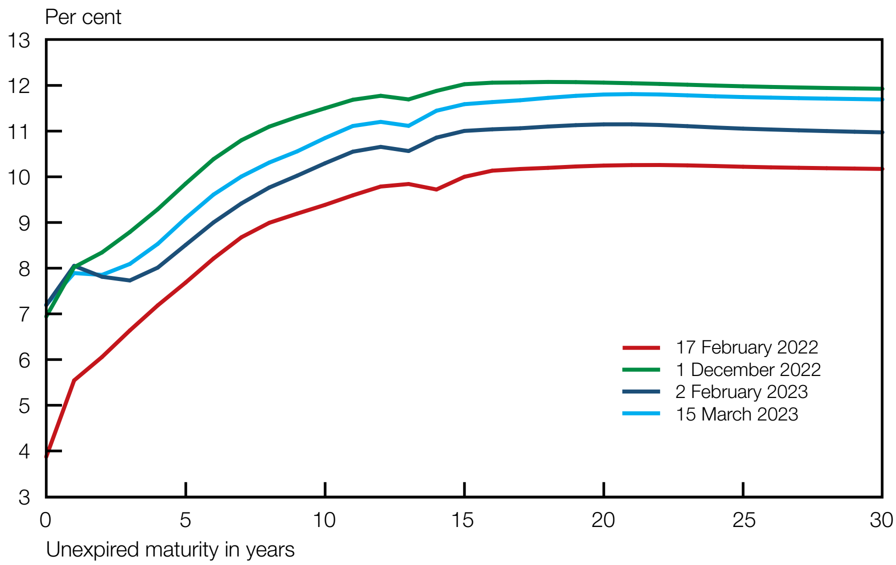



Sources: IRESS, JSE and Stats SA

Movements in the level of the *yield curve* in 2022 reflected the impact of the underlying drivers of bond yields, as discussed earlier. The slope of the yield curve flattened slightly and shifted higher across all maturities from 17 February 2022 to 1 December before flattening to 2 February 2023 as yields at the 0–1 year maturity range increased slightly alongside the increase in the repo rate, while yields over the remainder of the maturity spectrum declined. Subsequently, the level of the yield curve moved higher, and more so over the longer-term maturity spectrum. The yield gap[26] narrowed from 630 basis points on 17 February 2022 to 378 basis points on 2 February 2023 before widening slightly to 449 basis points on 15 March.

26 The yield gap is measured as the difference between yields at the extreme long and short ends of the yield curve.

Yield curve




Sources: IRESS and JSE

27 The EMBI+ measures the total returns on US dollar-denominated debt instruments of emerging market economies.

28 This is the differential between the yield on South African government US dollar-denominated bonds and the yield on US dollar-denominated bonds of the US government.

29 The SARB has indicated its intention to expand market liquidity from R50 billion to R80 billion in a phased approach between March and April 2023. At the same time, the shock buffer will be increased to R20 billion, according to the market notice available at https://www.resbank.co.za/content/dam/sarb/publications/financial-markets/notices/fmd-notices/2023/notice-revisions-to-bank-quotas-february2023.pdf.

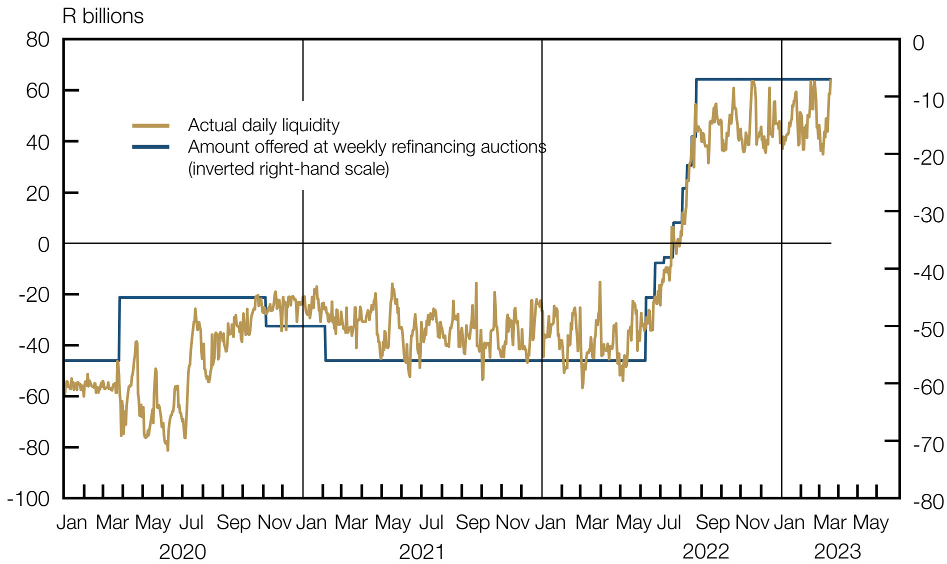
The yield spread for emerging market US dollar-denominated bonds relative to US government bonds, as measured by the JPMorgan Emerging Markets Bond Index Plus (EMBI+)[27], narrowed from 467 basis points in September 2022 to 387 basis points in February 2023 amid, among other factors, China's increased trade readiness following the rescinding of its strict zero-COVID-19 policy as well as expectations of slowing inflation and smaller interest rate increases in the US. Similarly, South Africa's *sovereign risk premium*[28] on US dollar-denominated government bonds in the seven-year maturity range narrowed from an average of 440 basis points in July 2022 to 314 basis points in February 2023.

## Money market

The average daily surplus liquidity position of private sector banks was R45.8 billion in the fourth quarter of 2022, and varied between a low of R35.5 billion and a high of R63.5 billion. The monetary policy implementation framework (MPIF) of the SARB currently aims to maintain a targeted liquidity of R50 billion[29] within a range of between R40 billion and R60 billion. When the end-of-day liquidity needs within the South African Multiple Option Settlement (SAMOS) system are outside of this range, the SARB has supplementary measures at its disposal to either drain or add liquidity. For example, the high of R63.5 billion on 17 November 2022 occurred when banks accessed the supplementary reserve repurchase facility to square off positions, and the low of R35.5 billion occurred on 8 December 2022 when the withdrawal of Corporation for Public Deposits (CPD) funds from banks for placement at the SARB caused a temporary decrease in the overall surplus liquidity position of banks.

The SARB has maintained the amount on offer at the weekly main refinancing auctions at R7.0 billion, even though the implementation of the surplus-based MPIF from June 2022 has reduced the need for banks to access funds at these auctions. In January and February 2023, the average daily surplus liquidity position of private banks of R48.3 billion reflected banks' increased participation in the weekly main refinancing auctions as well as a reduction in bank deposits at the SARB at the end-of-day square-off in preparation for coupon payments on government bonds. The SARB provided accommodation of, on average, R3.3 billion to banks at the weekly main refinancing auctions in January 2023 and R3.4 billion in February, up from R3.6 billion in December 2022.

Daily liquidity

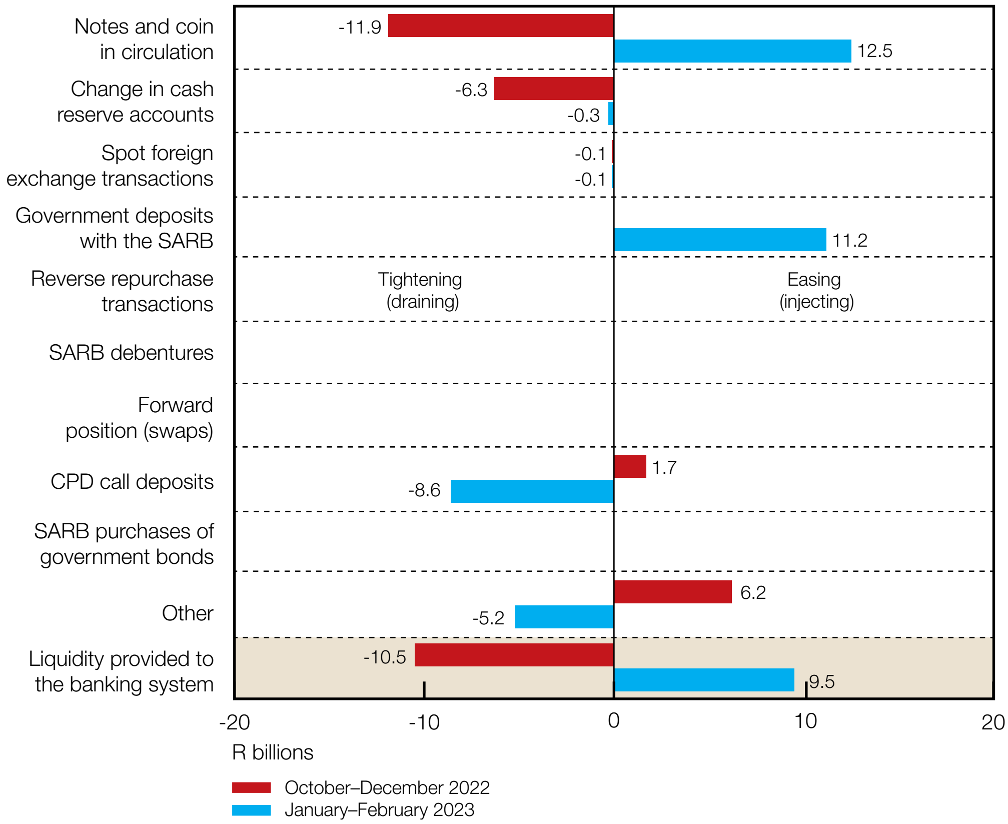



Source: SARB

Money market liquidity contracted by R10.5 billion in the fourth quarter of 2022, in contrast with the expansion of R73.1 billion in the third quarter. The main contributors to the contraction in the fourth quarter were an increase in notes and coin in circulation outside of the SARB of R11.9 billion as well as an increase in the required cash reserve deposits of private sector banks of R6.3 billion. This was partly offset by CPD deposits of R1.7 billion placed at private sector banks and 'other factors' of R6.2 billion. The 'other factors' category includes accommodation to banks (which did occur), expansions in the loan guarantee scheme or transactions in government bonds (which did not occur) as well as other undisclosed factors.

In January and February 2023, money market liquidity expanded by R9.5 billion, mainly due to a decrease of R12.5 billion in notes and coin in circulation, while National Treasury withdrew R11.2 billion as part of the process of drawing down its Sterilisation Deposit Account at the SARB. This was partly countered by an increase of R8.6 billion in CPD deposits placed at the SARB and an increase in the required cash reserve deposits of private sector banks of R0.3 billion.

Factors influencing money market liquidity flows




Source: SARB

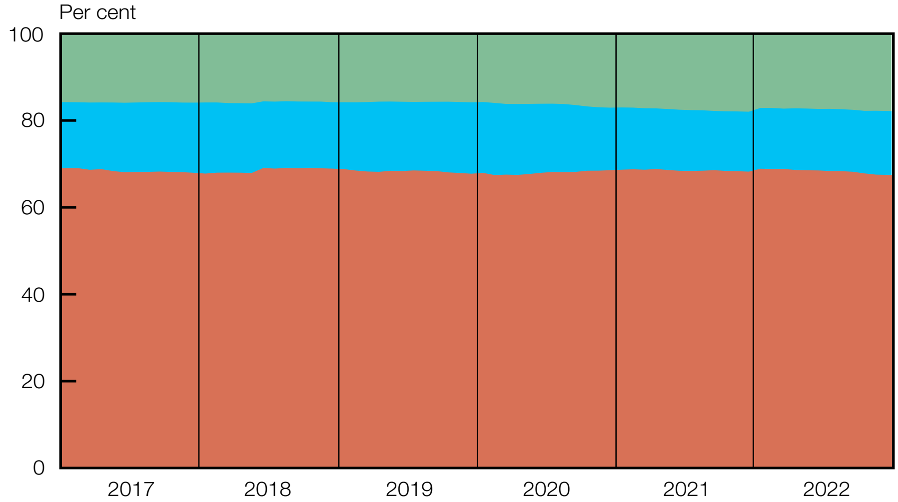
## Bond market

The *total nominal value of outstanding rand-denominated listed*[30] *and unlisted*[31] *debt securities* of R5.8 trillion issued by residents and non-residents in the domestic primary bond market at the end of 2022 was 10.5% more than at the end of 2021. Fixed-rate securities accounted for 67.5% of the total outstanding amount at the end of 2022. A further net issuance of R12.1 billion in January 2023 increased the nominal outstanding amount to R5.9 trillion at the end of January 2023, with a market value of R5.3 trillion.

30 These are debt securities listed on the JSE Limited (JSE) and the Cape Town Stock Exchange (CTSE).

31 These are debt securities not listed on a stock exchange and traded in the over-the-counter (OTC) market.

Interest rate composition of outstanding debt securities in issue in the domestic primary bond market*




* Nominal value

Sources: CTSE, JSE, National Treasury, banks and SARB

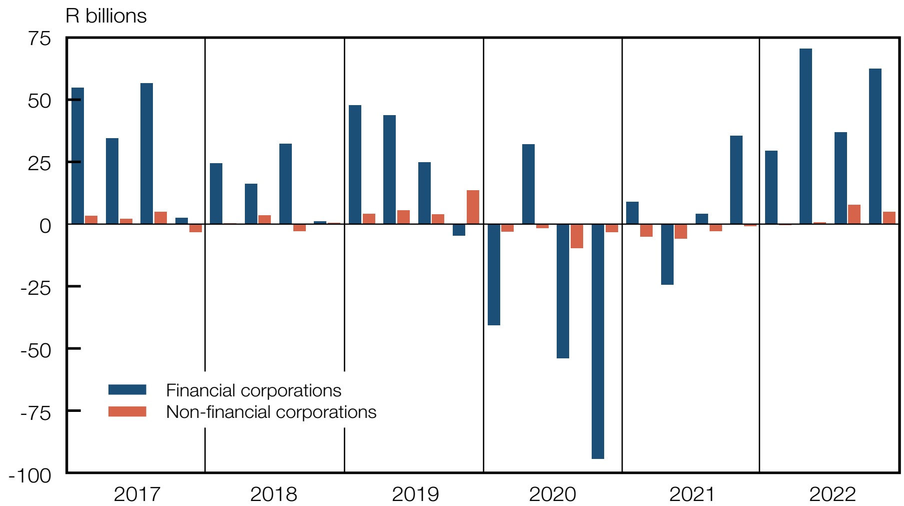
32 General government includes national government, extra-budgetary institutions and local governments.

33 Corporates include both public and private financial and non-financial corporations.

National government's net bond issuance of R350 billion in the domestic primary bond market in 2022 was 13.6% less than in 2021. The lower funding activity reflected a lower borrowing requirement because of an improved fiscal position which was supported by higher-than-expected revenue collection. General government's[32] net issuance of listed debt securities included an insignificant net issuance of R0.3 billion by local governments in 2022.

Net issuance in the domestic primary corporate[33] bond market increased considerably from R9.7 billion in 2021 to R212 billion in 2022, dominated by net issuance by financial corporations at 94.0%. The largest contributor was significant net issuance of short-term unlisted debt securities by banks to fund growing demand for credit extension amid favourable demand conditions.

Net issuance in the domestic primary corporate bond market*




* Nominal value

Sources: CTSE, JSE, banks and SARB

The daily average *value of turnover* in the domestic secondary bond market of R142 billion in 2022 was only 1.3% more than in 2021, while the daily average number of trades declined by 0.3% in 2022. Non-residents' contribution to the value of domestic bond turnover declined from, on average, 8.4% in 2021 to 8.1% in 2022. The daily average value of turnover increased to R165 billion in the first two months of 2023.

The issuance of rand-denominated bonds in the *European and Japanese bond markets* declined to R22.3 billion in 2022 as issuance in the European bond market more than halved. This, together with all-time high redemptions, contributed to a decline in the outstanding amount of rand-denominated bonds in issue in both markets, from R305 billion at the end of 2021 to R274 billion at the end of 2022. The dearth in issuance may reflect the effect of movements in the exchange value of the rand and higher interest rates. Subsequently, the outstanding amount of rand-denominated debt in these markets continued to decline to R270 billion at the end of February 2023.

Rand-denominated bonds issued in international bond markets

R millions

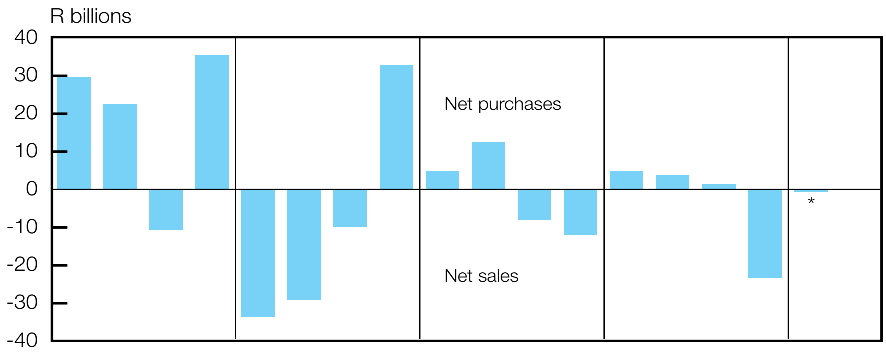
| | Eurorand | | Uridashi | | Total | |
|---|---|---|---|---|---|---|
| | 2021 | 2022 | 2021 | 2022 | 2021 | 2022 |
| Issues | 53 436 | 20 472 | 0 | 1 828 | **53 436** | **22 300** |
| Redemptions | 36 124 | 51 375 | 4 825 | 1 309 | **40 949** | **52 684** |
| Net | 17 312 | -30 903 | -4 825 | 519 | **12 487** | **-30 384** |

Source: Bloomberg

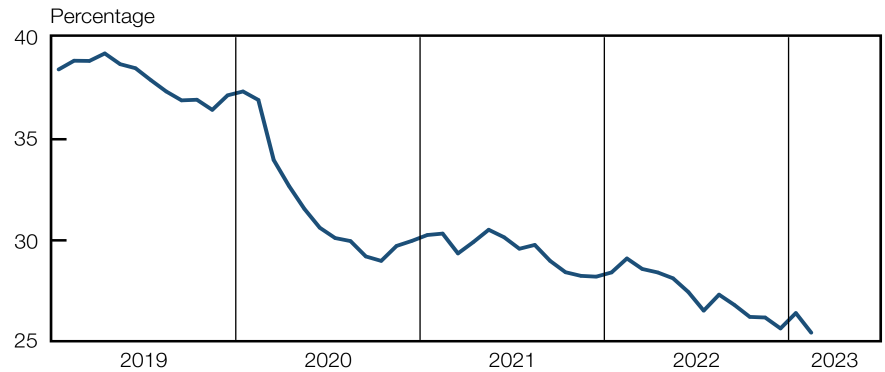
*Non-residents'* net sales of JSE-listed bonds of R23.4 billion in the fourth quarter of 2022 followed net purchases in the previous three quarters.[34] This resulted in cumulative net sales of bonds by non-residents of R13.3 billion in 2022 compared with net sales of only R2.7 billion in 2021. Non-residents recorded further net sales of R0.7 billion in the first two months of 2023. The net sales reflected investor concerns related to high global inflation and continued monetary policy tightening. The share of non-resident holdings of domestic government bonds continued to decline during 2022 and reached 25.4% at the end of February 2023.

34 The source for this information is the JSE.

Non-resident net transactions in the domestic bond market




The share of non-resident holdings of domestic government bonds




* January and February

Sources: JSE and National Treasury

## Share market

Following a significant increase in 2020, the value of *equity capital raised* in the domestic and international primary share markets by JSE-listed companies declined by 63.8% in 2021 and by a further 47.7% in 2022 to only R13.3 billion – the lowest since 1994. The lower demand for equity capital reflected the continuing challenging economic conditions. Listed companies in the financial and resources sectors contributed the most to the total value of capital raised in 2022, at 36.4% and 25.6% respectively. The value of shares issued in the first two months of 2023 amounted to only R1.1 billion.

The combined *value of turnover* in the secondary share market of the five South African stock exchanges increased by only 0.4% to R5.9 trillion in 2022 and amounted to R0.9 trillion in the first two months of 2023. While the listings on A2X Markets, the Cape Town Stock Exchange and the Equity Express Securities Exchange increased in 2022, listings on the JSE declined further due to 25 delistings and only 5 new listings. Consistent with movements in share prices, the combined *market capitalisation* of all the shares listed on all the exchanges increased from a recent low of R18.5 trillion in September 2022 to R23.0 trillion in January 2023 before declining to R22.5 trillion in February.

Number of listings on the various South African exchanges

| As at 31 December | JSE | A2X Markets | Cape Town Stock Exchange | Equity Express Securities Exchange | ZAR X |
|---|---|---|---|---|---|
| 2020 | 339 | 40 | 8 | 4 | 7 |
| 2021 | 324 | 59 | 11 | 4 | 4 |
| 2022 | 304 | 93 | 15 | 6 | 3 |
| 2023 (as at 28 February) | 302 | 95 | 16 | 6 | 3 |

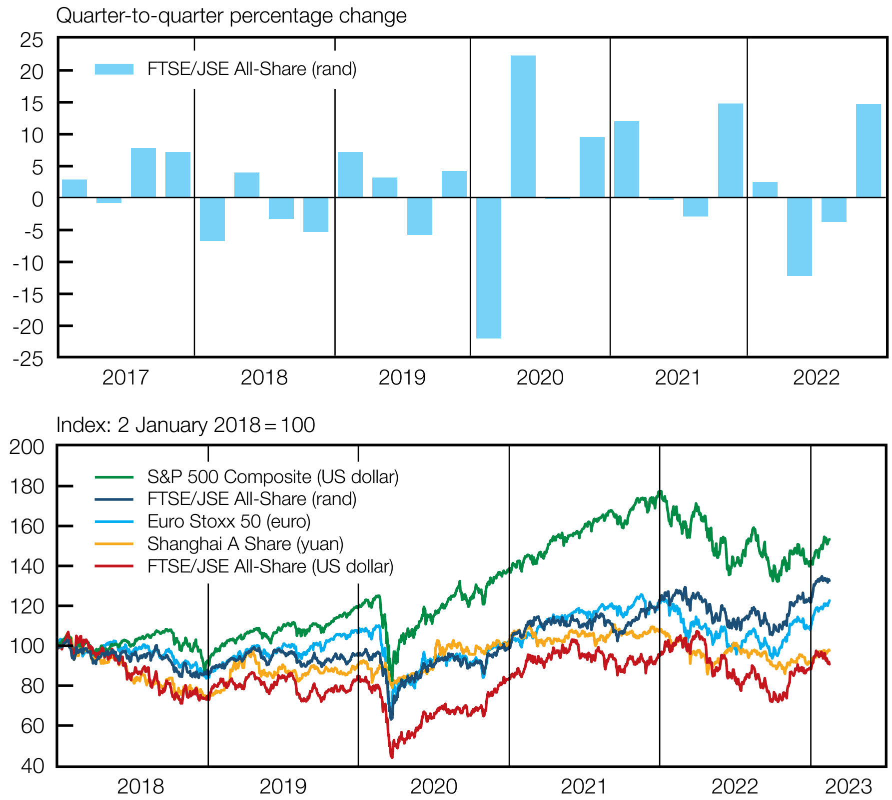
Sources: Various stock exchanges

35 The source for this information is the JSE.

*Non-residents'* net sales of JSE-listed shares amounted to R14.8 billion in the fourth quarter of 2022 and followed net sales of R49.9 billion and R47.8 billion in the second and third quarter respectively.[35] On a cumulative basis, non-residents' net sales of shares of R84.7 billion in 2022 were much less than the R153 billion recorded in 2021. Non-residents' net sales of R18.8 billion in the first two months of 2023 reflected continued concerns over persistent electricity load-shedding and its impact on South Africa's economic growth.

*Share prices* in the domestic share market experienced heightened volatility along a declining trend during most of 2022 – a year characterised by the start of the war in Ukraine, and a year which necessitated significant monetary policy tightening by most central banks in response to higher inflation as well as renewed COVID-19 restrictions in China. Nonetheless, the share prices of JSE-listed companies rebounded towards the end of 2022, with the FTSE/JSE Alsi, in rand terms, increasing by 14.6% in the fourth quarter to end the year only 0.9% lower than the end of 2021. Despite concerns over intensified electricity load-shedding, the Alsi reached an all-time high of 80 791 index points on 27 January 2023 before declining to 72 896 index points on 15 March. The Alsi, in US dollar terms, largely tracked its global counterparts and increased by 18.1% in the five months to February 2023, with the US, European and Chinese stock markets increasing by 10.7%, 27.3% and 8.5% respectively over the same period. This was mainly related to renewed optimism regarding the outlook for global economic growth, driven especially by China's economic recovery, and expectations that inflation in the US may be on a sustained downward trend.

Share prices




Sources: IRESS and JSE

The overall *price-earnings ratio* of ordinary shares listed on the JSE declined from a high of 17.4 in January 2022 to a low of 11.3 in October, as earnings increased and share prices declined, before increasing to 14.5 in January 2023 along with higher share prices. The price-earnings ratio then declined to 12.9 in February. By contrast, the *dividend yield* increased from 1.8% in January 2022 to 3.3% in October before decreasing to 2.5% in February 2023 as share prices increased while dividends declared declined.

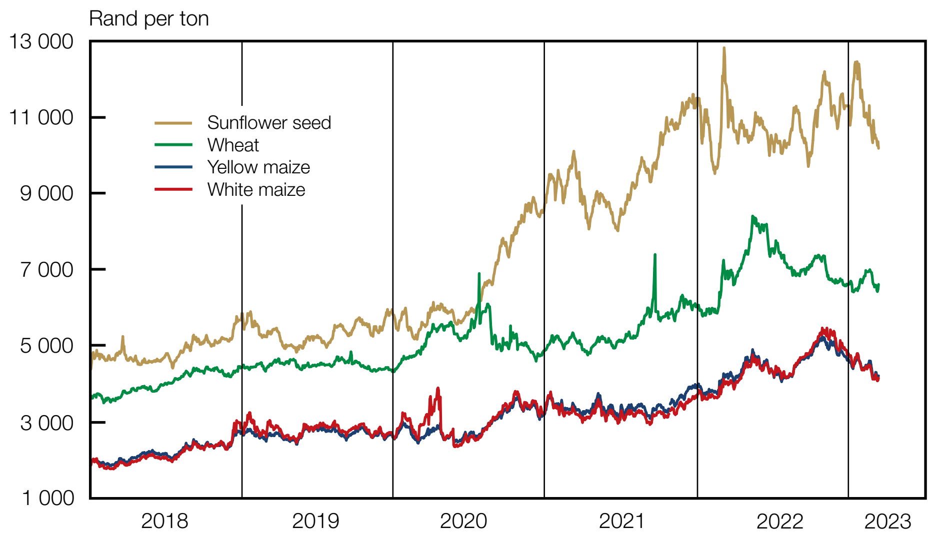
## Market for exchange-traded derivatives

Despite the smaller area planted for the 2022/23 production season, the domestic *spot prices of white and yellow maize contracts* traded on the JSE continued to trend lower in the first quarter of 2023. The spot price of white maize contracts declined by 24.0% from R5 471 per ton on 31 October 2022 to R4 158 per ton on 15 March 2023. Similarly, the yellow maize spot price declined by 19.7% from R5 251 per ton to R4 218 per ton over the same period. The decline in domestic maize prices was in line with lower international maize prices, partly due to the agreement signed in July 2022 to resume grain exports from Ukraine amid the ongoing war.

The *spot price of domestic wheat contracts* decreased by 13.1% from a recent high of R7 381 per ton on 21 October 2022 to R6 415 per ton on 13 January 2023 following the appreciation in the exchange value of the rand and lower international wheat prices. Subsequently, the domestic wheat price increased by 9.1% to R7 001 per ton on 22 February as the exchange value of the rand depreciated and international wheat prices again increased. Moreover, both the Crop Estimates Committee of the Department of Agriculture, Land Reform and Rural Development as well as the US Department of Agriculture (USDA) lowered their 2022/23 domestic and global wheat production estimates due to unfavourable weather conditions. Despite this, domestic wheat prices declined again to R6 617 per ton on 15 March.

The *spot price of domestic sunflower seed contracts* displayed increased volatility and fluctuated higher from a recent low of R9 708 per ton on 27 September 2022 to R12 460 per ton on 23 January 2023 against the backdrop of the smaller domestic area planted for 2023 and sustained demand from China, despite lower international prices. Subsequently, domestic sunflower seed prices declined by 18.3% to R10 184 per ton on 15 March.

Grain prices

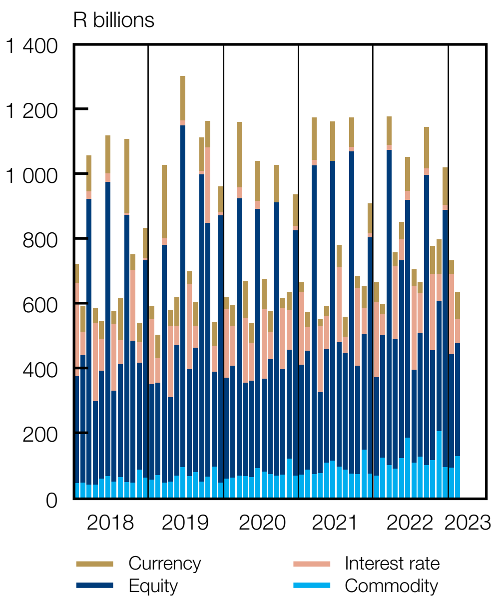



Source: JSE

36 Total derivatives turnover includes the value of futures and options contracts traded in the equity, commodity, warrants, interest rate and currency markets.

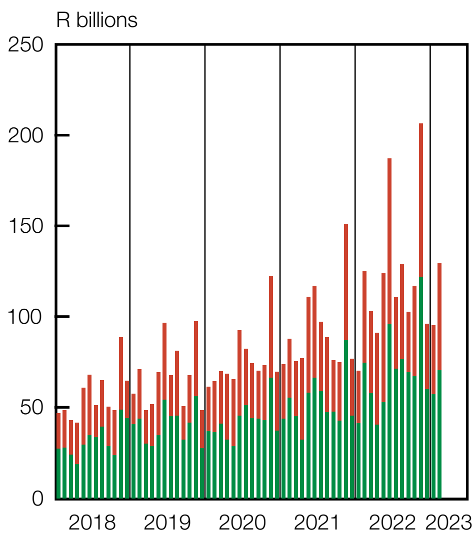
The total *value of turnover in the derivatives markets of the JSE*[36] increased by 7.6% year on year to an all-time high of R10.2 trillion in 2022, with a further R1.4 trillion traded in January and February 2023. Although equity derivatives turnover contributed the most to the total value of derivatives turnover in 2022, at 63.5%, the surge largely resulted from a marked increase in commodity derivatives turnover as investors continued to hedge against movements in commodity prices. Trading activity in white and yellow maize led the increase in commodity derivatives turnover in 2022, accounting for 56.8% of total commodity derivatives turnover.

Derivatives turnover on the JSE




Source: JSE

Commodity derivatives turnover on the JSE

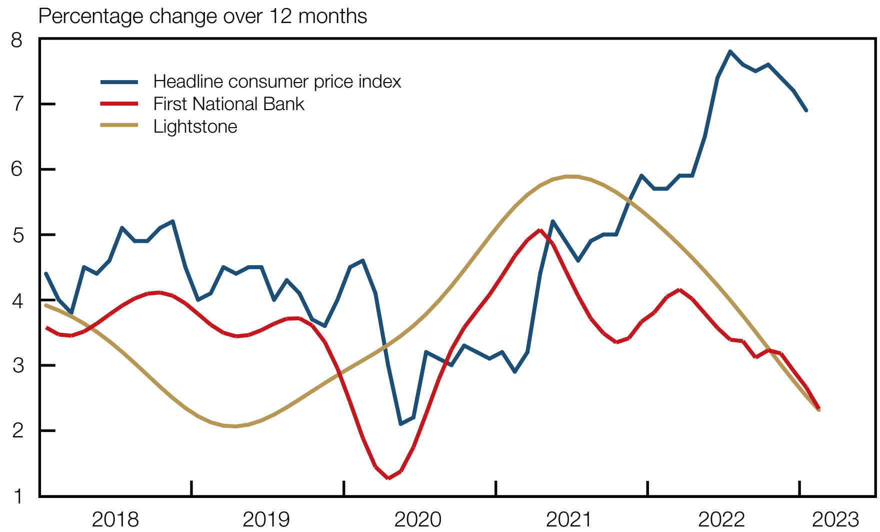



* Other commodities include other agricultural products, energy products and metals

# Real estate market

Growth in nominal residential property prices continued to slow, with the year-on-year rate of increase in the two available house price indices both moderating to 2.3% in February 2023, well below headline consumer price inflation. This reflected, among other factors, the impact of higher interest rates and uncertain employment prospects on the demand for residential property.

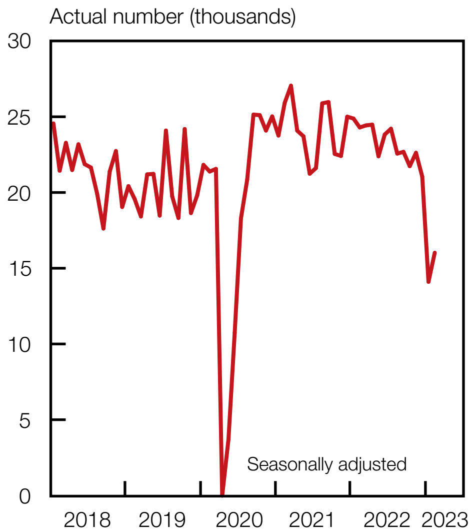
Residential property and consumer prices




Sources: FNB, Lightstone and Stats SA

Lacklustre growth in nominal house prices coincided with the 3.5% decline in the seasonally adjusted number of property transfers recorded at the Deeds Office in 2022, which declined even further up to February 2023 to levels last seen during the COVID-19 pandemic in June 2020. The time that residential properties remained on the market also increased from an average of 8.1 weeks in 2021 to 9.2 weeks in 2022.

Residential property transfers




Source: Lightstone

Average time that residential properties remain on the market


Source: FNB

## Non-bank financial intermediaries

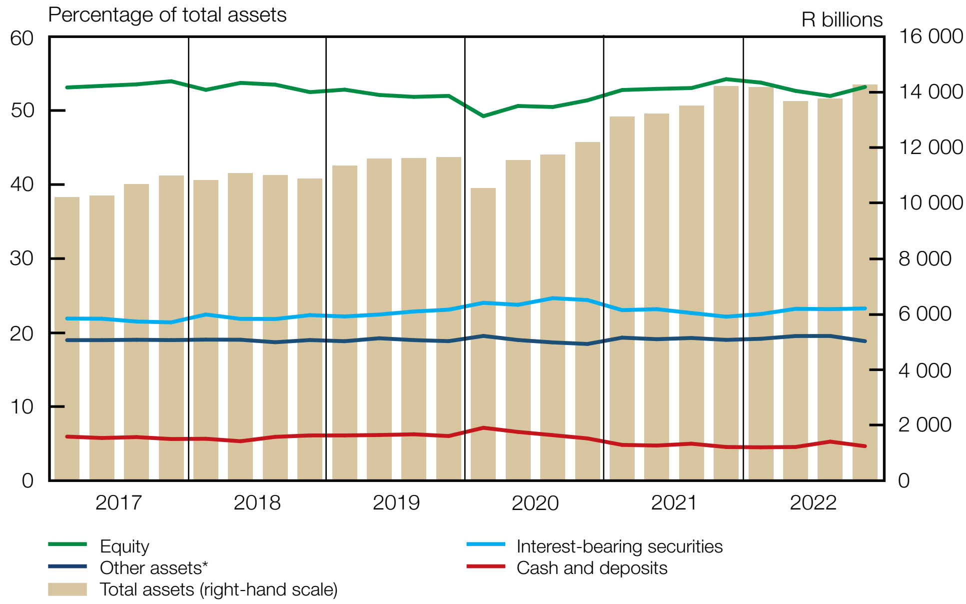
The increase in the market value of the total assets[37] of non-bank financial intermediaries[38] of 3.7% from the third quarter of 2022 to R14.3 trillion in the fourth quarter mainly reflected the revaluation effect of higher asset prices. Both share and bond prices increased noticeably in the fourth quarter of 2022 as the Alsi and the All Bond Index increased by 14.6% and 5.6% respectively. For the year as a whole, the value of the total assets of these intermediaries increased by 0.4% compared with 16.7% in 2021. From the third quarter of 2022 to the fourth quarter, the value of the assets managed by the Public Investment Corporation (PIC) increased the most, by 6.3% to R2.6 trillion, while the assets of unit trusts increased by 5.2% to R3.7 trillion. Higher asset prices contributed about R132 billion to the increase in the assets managed by the PIC in the final quarter of 2022, compared with R90 billion in the same period of 2021. The value of the assets of insurance companies grew by 4.1% from the third quarter of 2022 to R4.3 trillion in the fourth quarter. The value of the assets of other financial intermediaries[39] increased by 2.5% to R417 billion in the fourth quarter of 2022, buoyed by an increase in credit extension by vehicle finance companies and securitisation vehicles.

37 The assets are not consolidated for cross-investment between sectors.

38 These consist of unit trusts, the Public Investment Corporation (PIC), life and non-life insurance companies, official and private retirement funds, participation bond schemes, other financial intermediaries as well as non-monetary public financial corporations.

39 These comprise finance companies, securitisation vehicles and central clearing counterparties.

Total assets of non-bank financial intermediaries




* Other assets include insurance policies, reinsurance assets, loans, financial derivatives and accounts receivable

Source: SARB

The proportion of assets held by non-bank financial intermediaries in equity portfolios increased by 1.2 percentage points from the third quarter of 2022 to 53.2% of total assets in the fourth quarter. However, for 2022, equity holdings declined by 1.1 percentage points in line with the weak economic environment. Higher bond prices supported holdings of interest-bearing securities by non-bank financial intermediaries in the fourth quarter of 2022 as they increased by 0.1 percentage points to 23.3% of total assets. Investment in cash and deposits fell by 0.6 percentage points to 4.7% of total assets in the fourth quarter of 2022. Nevertheless, the interest rate increases appeared to have supported the reallocation of funds to cash and deposits in 2022, as exposure to this asset class increased by 0.1 percentage points. Holdings of other assets declined slightly by 0.7 percentage points from the third quarter of 2022 to 18.9% of total assets in the fourth quarter.

The nominal value of loans extended by non-bank financial intermediaries increased by 13.0% in 2022 compared with a decline of 0.8% in 2021. However, loans extended declined slightly by 0.1 percentage points from the third quarter of 2022 to 4.3% of total assets in the fourth quarter, likely reflecting the uncertain economic environment.

## Flow of funds

Global economic activity remained subdued in the third quarter of 2022 while persistently high inflation led to monetary policy tightening as geopolitical tensions continued to impact on global supply and demand dynamics. The net capital inflow from *non-residents* to the domestic economy increased to R21.5 billion in the third quarter of 2022 from only R0.9 billion in the second quarter. This was because domestic investors' holdings of foreign assets decreased more than non-residents' holdings of domestic assets in the third quarter of 2022.

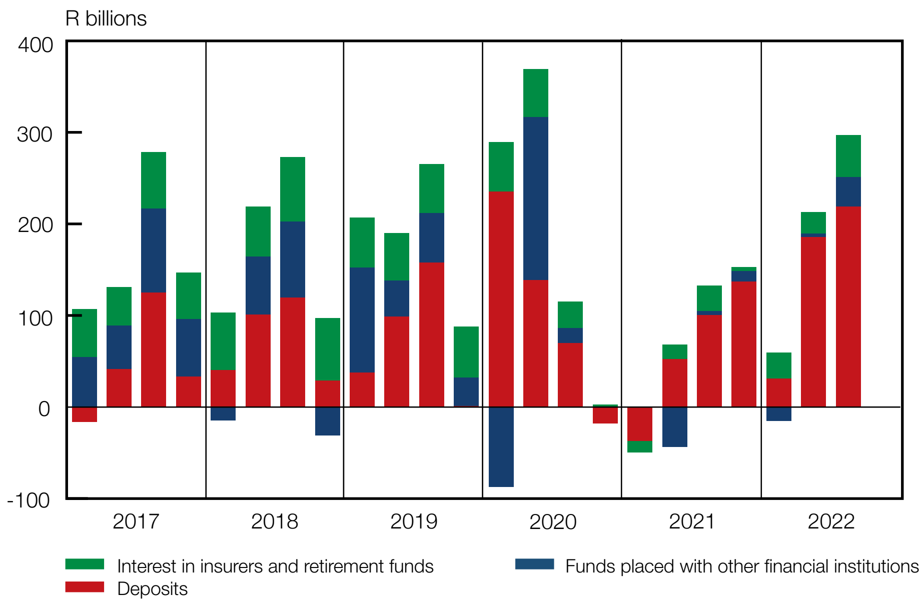
Non-residents' net sales of R9.6 billion in fixed-interest securities in the third quarter of 2022 followed net purchases of R52.6 billion in the second quarter. Furthermore, non-residents' shareholding declined by R14.4 billion while loans extended mainly to non-financial corporate business enterprises amounted to R7.5 billion in the third quarter of 2022. Non-residents' exposure to financial derivatives declined further by R98.0 billion in the third quarter while their deposit holdings with domestic banks increased by R26.6 billion.

*Financial intermediation*[40] flows increased as domestic economic activity recovered in the third quarter of 2022 despite extensive electricity load-shedding. Monetary institutions received funds through deposits to the amount of R219 billion in the third quarter of 2022 compared with R186 billion in the second quarter as interest rates increased. Furthermore, funds placed with other financial institutions (collective investment schemes) were much higher at R32.0 billion in the third quarter of 2022 compared with R4.1 billion in the second quarter, while net flows to insurers and retirement funds amounted to R45.8 billion in the third quarter of 2022.

40 Financial intermediaries comprise the monetary authority, banks and non-bank financial institutions (excluding the PIC).

Financial intermediaries' net acquisition of financial assets was somewhat higher in the third quarter of 2022, with net purchases of fixed-interest securities of R90.1 billion mainly by the monetary authority and banks, while insurers and retirement funds were net sellers. Shareholding by financial intermediaries increased by R62.7 billion in the third quarter of 2022, mainly by non-bank financial intermediaries. Credit extended by financial intermediaries was much lower at R1.1 billion in the third quarter of 2022, mainly due to repayments of trade credit and short-term loans from the foreign sector.

Net incurrence of selected financial liabilities by financial intermediaries




Source: SARB

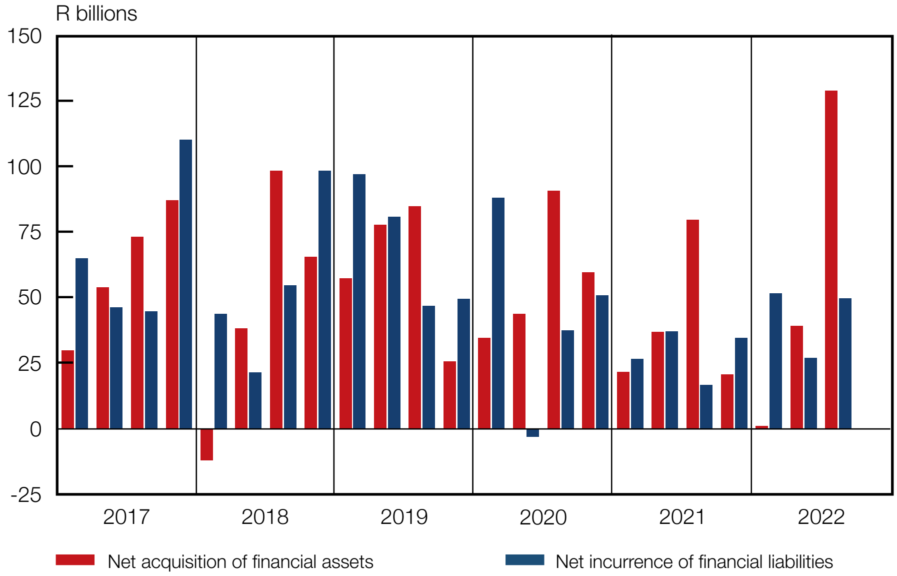
Gross capital formation by *general government* moderated slightly in the third quarter of 2022 while its gross saving reverted to significant dissaving and contributed to a larger net borrowing requirement of R175 billion compared with only R22.3 billion in the second quarter. The shortfall was mainly financed in the domestic capital market through net bond issuance of

R99.6 billion, of which banks were the main net purchasers. The net redemption of TBs amounted to R7.6 billion in the third quarter of 2022, while long-term loans of R6.9 billion were sourced from the World Bank by central government. The general government sector reduced its deposits with the monetary sector by R98.5 billion during the third quarter of 2022.

Gross saving by *public and private non-financial corporate business enterprises* increased by 80.7% in the third quarter of 2022 compared with a decline of 45.4% in the second quarter. At the same time, gross capital formation by non-financial corporate business enterprises increased to R203 billion in the third quarter of 2022, mainly due to higher capital spending by private non-financial enterprises. The non-financial corporate business enterprises switched from a net borrowing position of R36.5 billion in the second quarter of 2022 to a net lending position of R30.5 billion in the third quarter. These funds were channelled to deposits of R67.4 billion and increased exposure to financial derivatives of R137 billion. The sector sourced R84.1 billion in loans in the third quarter of 2022 compared with R71.0 billion in the second quarter, while also sourcing funds through share issuances. By contrast, net redemptions of R29.7 billion in public sector securities were recorded in the third quarter of 2022, mostly because of the redemption of a foreign currency-denominated bond.

Higher interest rates impacted on the *household sector's* disposable income in the third quarter of 2022 while higher inflation reduced its purchasing power. However, its gross saving still increased and contributed to a larger net lending position of R79.4 billion in the third quarter of 2022 compared with R12.2 billion in the second quarter. The surplus funds were partly channelled to cash and deposits of R52.1 billion in the third quarter of 2022 compared with R34.1 billion in the second quarter. Furthermore, net purchases of units with other financial institutions (known as collective investment schemes) amounted to R21.6 billion, and funds to insurers and retirement funds amounted to R31.9 billion in the third quarter of 2022. Households' demand for credit continued to increase and amounted to R38.0 billion in the third quarter of 2022, with mortgage loans contributing R22.2 billion. The household sector's net acquisition of financial assets increased at a much faster pace than its net incurrence of financial liabilities.

Net incurrence and acquisition of liabilities and assets by the household sector




Source: SARB

# Public finance[41]

## Non-financial public sector borrowing requirement

The preliminary *non-financial public sector borrowing requirement* of R75.0 billion in the first nine months of fiscal 2022/23 (April–December 2022) was about half of that in the same period of the previous fiscal year. The significantly lower borrowing requirement reflected the smaller deficit of the consolidated general government, in particular national government, and cash surpluses for all the other spheres of general government. The smaller deficit of national government could be attributed to higher cash receipts from operating activities due to strong collections in most of the tax categories. The non-financial public enterprises and corporations, or state-owned companies (SOCs), reverted from a cash *surplus* to a *deficit*.

41 Unless stated to the contrary, the year-on-year rates of increase in this section compare April–December 2022 to April–December 2021. Data for both periods are unaudited and preliminary.

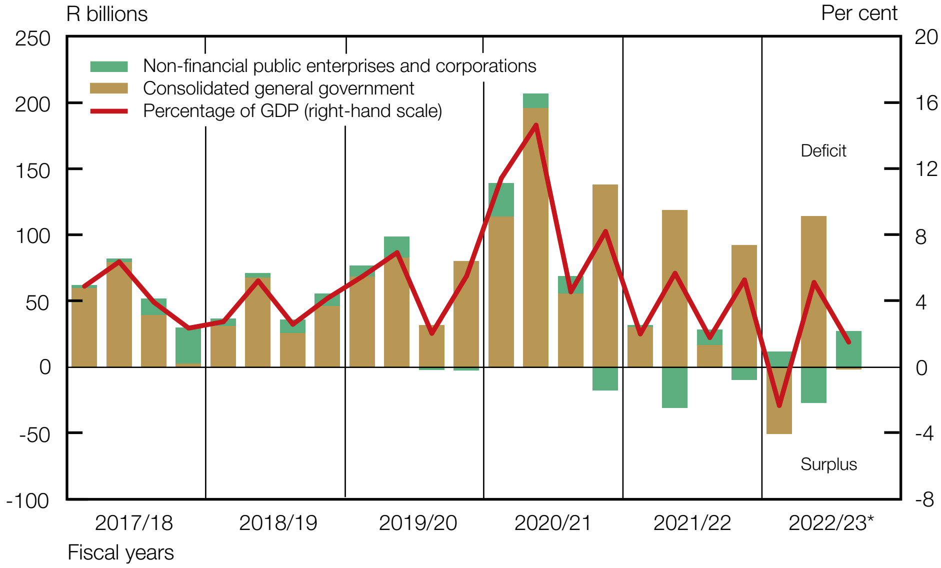
### Non-financial public sector borrowing requirement

R billions

| Level of government | Apr–Dec* 2021 | Apr–Dec* 2022 |
|---|---|---|
| Consolidated general government | 166.5 | 62.5 |
| National government | 212.1 | 175.1 |
| Extra-budgetary institutions | -21.9 | -40.3 |
| Social security funds | 3.3 | -24.9 |
| Consolidated provincial governments | -1.5 | -2.9 |
| Local governments | -25.5 | -44.4 |
| Non-financial public enterprises and corporations | -17.4 | 12.5 |
| **Total** | **149.1** | **75.0** |
| *As a percentage of gross domestic product* | *3.2* | *1.5* |

* Deficit (+)/surplus (-)
Components may not add up to totals due to rounding off.
Sources: National Treasury, Stats SA and SARB

### Non-financial public sector borrowing requirement



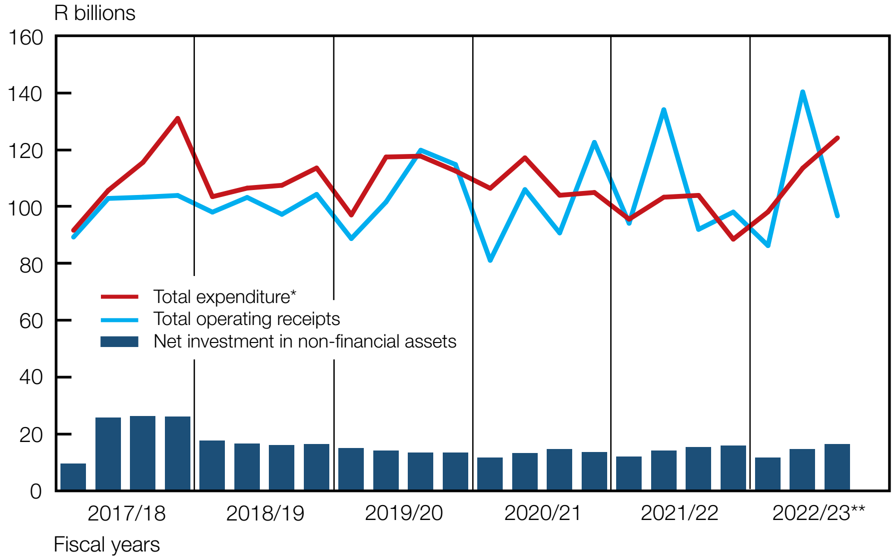

* April–December 2022

Sources: National Treasury, Stats SA and SARB

The financial activities of the non-financial SOCs resulted in a preliminary cash *deficit* of R12.5 billion in April–December 2022, signalling a reversal from a preliminary *surplus* of R17.4 billion in the same period a year earlier. The cash deficit could be attributed to the marginal increase of 1.0% year on year in total cash receipts from operating activities to R323 billion in April–December 2022, while total expenditure, inclusive of cash payments for operating activities and net investment in non-financial assets, increased by 10.9% to R336 billion. The lower cash receipts from operating activities resulted largely from less financial support (capital transfers) for SOCs by national government during the period.

The increase in total expenditure was due to purchases of goods and services to the value of R173 billion in the period under review compared with R142 billion during the same period in 2021. Net investment in non-financial assets increased by 3.1% to R42.7 billion in April–December 2022.

Financial activities of non-financial public enterprises and corporations




* Including both operating cash payments and net investment in non-financial assets
** April–December 2022

Source: SARB

The non-financial public sector borrowing requirement as a ratio of GDP decreased notably from 3.2% in the first nine months of fiscal 2021/22 to 1.5% in April–December 2022.

### Box 2 The *2023 Budget Review*[1]

The 2023 Budget proposals still intend to stabilise the public finances through a strategy to restore the fiscal balance and address fiscal risks while promoting economic growth. Economic growth is supported through policies that provide a stable macroeconomic framework together with growth-enhancing reforms in especially energy and transport while also strengthening the capacity of government.

Better-than-expected revenue collections, especially from the mining sector due to high commodity prices but also because of increased economic activity in the manufacturing and financial services sectors after the coronavirus disease 2019 (COVID-19) pandemic, contributed to the narrowing of the consolidated budget deficit. The fiscal balance is expected to improve further over the medium term, with a primary surplus projected for fiscal 2022/23 – the first since fiscal 2008/09. The *2023 Budget Review* proposes debt relief of R254 billion over the next three years for Eskom to improve its balance sheet and to enable the availability of funding for maintenance. The scale of the debt relief is such that it increases government borrowing to the extent that gross loan debt now stabilises later than originally projected, at 73.6% of gross domestic product (GDP) in fiscal 2025/26.

1 The *2023 Budget Review* was presented to Parliament by the Minister of Finance on 22 February 2023.

Better-than-expected growth in real GDP of 2.5% is projected for 2022. However, growth is expected to be weaker over the medium term, averaging 1.4%, due to persistent electricity load-shedding, a deterioration in the rail and port infrastructure, and a weaker global economic growth outlook. Headline consumer price inflation is expected to ease to 5.3% in 2023. A current account deficit-to-GDP ratio of 0.4% is expected in 2022, which thereafter is projected to increase to 2.1% in 2025.

Macroeconomic projections*

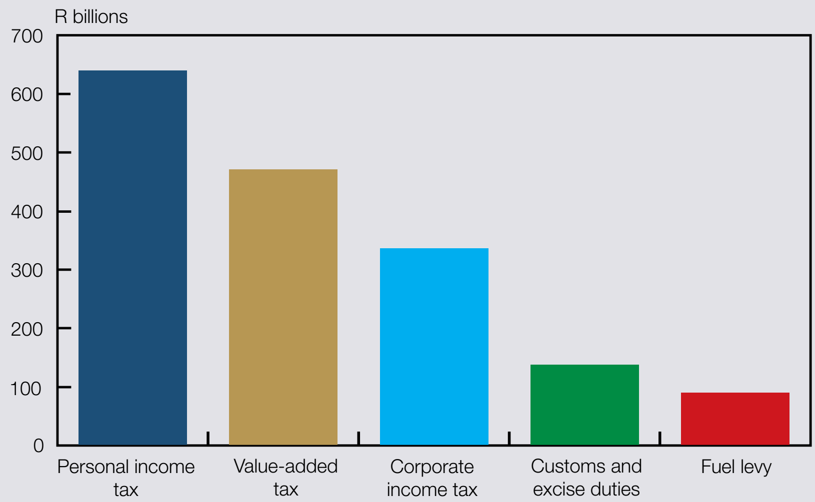
| Percentage | 2020 | 2021 | 2022 | | | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|
| | Outcome | | 2022 Budget | *2022 MTBPS* | 2023 Budget | Medium-term estimates** | | |
| Real GDP growth ...................... | -6.3 | 4.9 | 2.1 | 1.9 | 2.5 | 0.9 | 1.5 | 1.8 |
| Consumer price inflation............ | 3.3 | 4.5 | 4.8 | 6.7 | 6.9 | 5.3 | 4.9 | 4.7 |
| Current account balance*** ........ | 2.0 | 3.7 | 0.3 | 0.2 | -0.4 | -1.8 | -2.0 | -2.1 |

* Calendar years
** *2023 Budget Review*
*** As a percentage of GDP

Source: National Treasury

Revenue collections in fiscal 2022/23 outperformed the originally budgeted consolidated government revenue and are now expected to be R10.5 billion more than in the *2022 Medium Term Budget Policy Statement (2022 MTBPS).* A revenue-to-GDP ratio of 28.5% is expected in fiscal 2022/23.

Main sources of consolidated government revenue in fiscal 2023/24




Sources: National Treasury and SARS

In fiscal 2023/24, personal income tax (PIT), value-added tax (VAT) and corporate income tax (CIT) are expected to remain the main sources of government revenue, contributing 73.9% to total revenue of consolidated government. Moreover, government provided tax relief to households by fully adjusting the PIT brackets and rebates for inflation. Additional tax relief of R13.0 billion was provided to support the clean-energy transition, increase electricity supply and limit the impact of high fuel prices.

The main tax proposals for fiscal 2023/24 include:

- PIT: brackets adjusted in line with the expected inflation rate of 4.9%.
- General fuel levy and Road Accident Fund (RAF) levy: no increase.
- Diesel fuel levy refund: extended to manufacturers of foodstuffs for a period of two years, from 1 April 2023 until 31 March 2025.
- Solar panel installation incentive: R4.0 billion to households.
- Expansion of the renewable energy incentive: R5.0 billion for companies.
- Excise duties: an increase in line with the expected inflation rate of 4.9% on alcohol and tobacco.
- Retirement and withdrawal lump sum tax: adjusted upwards by 10%, and at retirement or retrenchment the one-off tax-free amount increases to R550 000.
- Transfer duty: increased by 10%, with properties valued at less than R1.1 million exempted.

Consolidated fiscal framework indicators*

| R billions | 2020/21 | 2021/22 | 2022/23 | | | 2023/24 | 2024/25 | 2025/26 |
|---|---|---|---|---|---|---|---|---|
| | Outcome | | 2022 Budget | *2022 MTBPS* | 2023 Budget | Medium-term estimates** | | |
| Consolidated revenue | 1 409 | 1 751 | 1 771 | 1 882 | 1 893 | 1 959 | 2 078 | 2 225 |
| *Percentage of GDP* | *25.1* | *27.8* | *27.5* | *28.3* | *28.5* | *28.0* | *27.9* | *28.0* |
| Consolidated expenditure | 1 964 | 2 043 | 2 157 | 2 205 | 2 169 | 2 243 | 2 360 | 2 477 |
| *Percentage of GDP* | *35.0* | *32.5* | *33.5* | *33.2* | *32.6* | *32.0* | *31.7* | *31.2* |
| Consolidated budget balance | -555 | -292 | -387 | -323 | -276 | -284 | -282 | -252 |
| *Percentage of GDP* | *-9.9* | *-4.6* | *-6.0* | *-4.9* | *-4.2* | *-4.0* | *-3.8* | *-3.2* |
| Primary balance | -314 | -15 | -76 | -15 | 40 | 66 | 90 | 155 |
| *Percentage of GDP* | *-5.6* | *-0.2* | *-1.2* | *0.2* | *0.6* | *0.9* | *1.2* | *2.0* |
| Gross loan debt*** | 3 936 | 4 277 | 4 692 | 4 752 | 4 727 | 5 060 | 5 424 | 5 843 |
| *Percentage of GDP* | *70.2* | *68.0* | *72.8* | *71.4* | *71.1* | *72.2* | *72.8* | *73.6* |
| Net loan debt*** | 3 602 | 4 011 | 4 503 | 4 508 | 4 483 | 4 913 | 5 323 | 5 757 |
| *Percentage of GDP* | *64.2* | *63.8* | *69.9* | *67.8* | *67.4* | *70.1* | *71.4* | *72.5* |

* Fiscal years. This is the consolidated budget framework of national, provincial and local government as well as social security funds and selected public entities. Budget data are therefore not strictly comparable with the data published in the SARB's *Quarterly Bulletin*.
** *2023 Budget Review*
*** Refers to national government, or the main budget

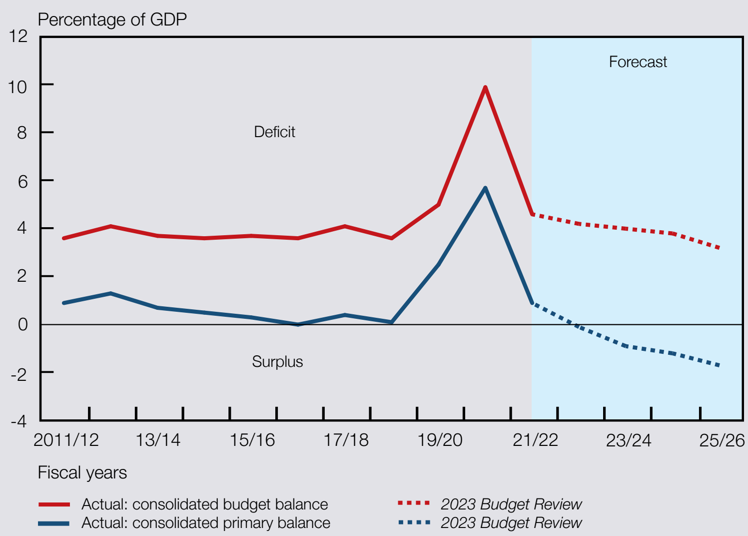
Source: National Treasury

Consolidated government expenditure is expected to reach 32.6% of GDP in fiscal 2022/23 before reducing to 31.2% in fiscal 2025/26. The 2023 Budget proposed total consolidated government expenditure of R2 243 billion for fiscal 2023/24, most of which was for socio-economic programmes with a focus on learning and culture (R457 billion), social development (R378 billion) (including the funding of the COVID-19 social relief of distress grant until 31 March 2024) and health (R259 billion). Debt-service cost remains one of the highest spending categories at R340 billion for fiscal 2023/24. Consolidated government spending is expected to increase to R2 477 billion in fiscal 2025/26.

The public sector wage bill, which increased at an annual average rate of 7.3% between fiscal 2014/15 and fiscal 2019/20, is now expected to increase by 3.3%, on average, over the medium term. The 2023/24 public sector wage agreement has not been finalised yet.

The proposed reductions in government spending are partially offset by additional allocations to state-owned companies (SOCs) over and above the proposed Eskom debt relief. An amount of R695 *million* has been allocated this fiscal year for immediate relief following the recent floods and the national disaster declared in various provinces, and R1.0 billion has been allocated for fiscal 2024/25.

Fiscal balances



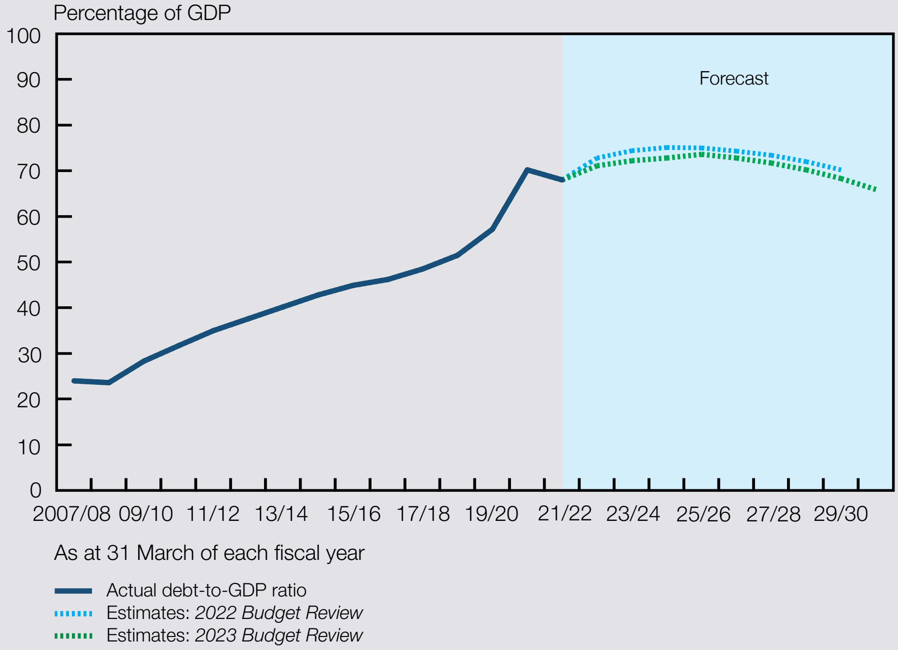

Source: National Treasury

Debt-service cost is expected to increase from R307 billion (4.6% of GDP) in fiscal 2022/23 to R397 billion (5.0% of GDP) in fiscal 2025/26.

The revised revenue and expenditure projections are expected to decrease the consolidated budget deficit from 4.2% of GDP in fiscal 2022/23 to 3.2% of GDP in fiscal 2025/26. The primary balance of consolidated government is expected to revert from a deficit of 5.6% of GDP in fiscal 2020/21 to a surplus of 0.6% of GDP in fiscal 2022/23 and 2.0% of GDP in fiscal 2025/26. The lower budget deficit mainly led to a decrease of R113.6 billion in the public sector's borrowing requirement expected in the *2022 Budget Review*, down to R326 billion (4.9% of GDP) in fiscal 2022/23.

The borrowing requirement will be financed through a combination of domestic short- and long-term loans, foreign currency loans and cash balances. The gross loan debt of national government is projected to increase from R4.7 *trillion* (71.1% of GDP) in fiscal 2022/23 to R5.8 *trillion* (73.6% of GDP) in fiscal 2025/26, driven by the projected budget deficits and the Eskom debt relief.

National government's gross loan debt




Source: National Treasury

Government's total contingent liabilities – including guarantees to SOCs, independent power producers (IPPs) and public-private partnerships (PPPs) – are projected to decline from R1.07 *trillion* in fiscal 2022/23 to R904.1 billion in fiscal 2025/26. The RAF remains government's largest contingent liability, followed by Eskom.

Weaker-than-expected global economic growth and inflationary pressures pose a risk to South Africa's fiscal outlook. In addition, major domestic risks include persistent electricity load-shedding, weak economic growth, higher borrowing costs, the introduction of unfunded spending programmes, unaffordable public-service wage settlements and the materialisation of contingent liabilities.

## Budget comparable analysis of national government finances

42 The primary balance is the cash book balance excluding interest payments.

National government's cash book deficit of R183.1 billion in the first nine months of fiscal 2022/23 (April–December 2022) was R36.1 billion less than in the same period in fiscal 2021/22. The smaller cash book deficit resulted from a larger increase in revenue relative to expenditure in the first nine months of fiscal 2022/23. The cash book deficit was primarily financed in the domestic financial markets through the net issuance of long-term government bonds and, to a lesser extent, through foreign bonds and loans. The primary balance[42] switched from a *deficit* of R54.9 billion for the period April–December 2021 to a *surplus* of R5.0 billion for the period April–December 2022.

National government finances

| | Actual Apr–Dec 2021 | | Actual Apr–Dec 2022 | | Originally budgeted[1] Fiscal 2022/23 | | Revised estimates[2] Fiscal 2022/23 | |
|---|---|---|---|---|---|---|---|---|
| | R billions | Percentage change[3] | R billions | Percentage change[3] | R billions | Percentage change[4] | R billions | Percentage change[5] |
| Revenue | 1 139.1 | 31.1 | 1 226.2 | 7.6 | 1 588.0 | 1.7 | 1 694.5 | 8.5 |
| *Percentage of GDP* | *24.1* | | *24.2* | | *24.7* | | *25.5* | |
| Expenditure | 1 358.2 | 4.3 | 1 409.3 | 3.8 | 1 975.3 | 4.7 | 2 018.2 | 7.0 |
| *Percentage of GDP* | *28.7* | | *27.8* | | *30.7* | | *30.3* | |
| Cash book balance[6] | -219.1 | | -183.1 | | -387.2 | | -323.7 | |
| *Percentage of GDP* | *-4.6* | | *-3.6* | | *-6.0* | | *-4.9* | |
| Primary balance[7] | -54.9 | | 5.0 | | -85.5 | | -16.0 | |
| *Percentage of GDP* | *-1.2* | | *0.1* | | *-1.3* | | *-0.2* | |
| Gross loan debt[8] | 4 271.5 | 11.4 | 4 714.3 | 10.4 | 4 692.2 | 9.7 | 4 752.0 | 11.1 |
| *Percentage of GDP* | *69.0* | | *71.0* | | *72.8* | | *71.4* | |

1 *2022 Budget Review*
2 *2022 MTBPS*
3 Year-on-year percentage change: actual outcome on previous year's actual outcome
4 Year-on-year percentage change: budgeted on previous year's actual outcome
5 Year-on-year percentage change: revised estimates on previous year's actual outcome
6 Cash book deficit (-)/surplus (+)
7 Cash book deficit (-)/surplus (+) excluding interest payments
8 As at 31 December for rand values

Sources: National Treasury, SARS and Stats SA

National government revenue increased by 7.6% year on year to R1 226.2 billion in the first nine months of fiscal 2022/23 on account of higher revenue collections in most tax categories, except for declines in the fuel levy and taxes on property. The *2022 Budget Review*'s projected revenue of R1 588.0 billion for fiscal 2022/23 was revised higher to R1 694.5 billion in the *2022 MTBPS*. Revenue as a ratio of GDP of 24.2% in the first nine months of fiscal 2022/23 was slightly higher than the 24.1% recorded in the same period of the previous fiscal year.

National government revenue in fiscal 2022/23

| Revenue source | Originally budgeted[1] Fiscal 2022/23 | | Revised estimates[2] Fiscal 2022/23 | | Actual Apr–Dec 2022 | |
|---|---|---|---|---|---|---|
| | R billions | Percentage change[3] | R billions | Percentage change[4] | R billions | Percentage change[5] |
| Taxes on income, profits and capital gains | 894.2 | -2.0 | 970.4 | 6.3 | 728.1 | 8.3 |
| *Of which*: Income tax on individuals | 587.9 | 5.8 | 596.1 | 7.3 | 426.4 | 8.7 |
| Income tax on companies | 269.9 | -16.5 | 332.7 | 2.9 | 271.5 | 6.8 |
| Payroll taxes | 20.6 | 6.6 | 21.2 | 9.8 | 15.4 | 8.9 |
| Taxes on property | 20.3 | -7.9 | 23.0 | 4.2 | 16.4 | -0.5 |
| Taxes on goods and services | 600.5 | 9.3 | 592.6 | 7.9 | 410.0 | 4.6 |
| *Of which*: Net value-added tax (VAT) | 439.7 | 12.5 | 434.9 | 11.3 | 299.9 | 8.3 |
| Domestic | 475.9 | 6.0 | 488.2 | 8.8 | 362.2 | 9.2 |
| Imports | 215.5 | 5.4 | 246.6 | 20.6 | 174.9 | 26.4 |
| Refunds | -251.8 | -4.0 | -300.0 | 14.3 | -237.2 | 22.7 |
| Fuel levy | 89.1 | 0.3 | 80.6 | -9.3 | 57.2 | -14.2 |
| Other excise duties | 58.6 | 3.8 | 62.6 | 10.9 | 42.0 | 9.7 |
| Taxes on international trade and transactions | 62.5 | 4.3 | 74.5 | 24.3 | 52.6 | 31.9 |
| *Of which*: Import duties | 61.1 | 5.2 | 72.6 | 25.0 | 50.8 | 32.4 |
| Other revenue[6] | 33.6 | -23.3 | 56.5 | 29.3 | 36.5 | -6.2 |
| *Less*: SACU[7] payments | 43.7 | -5.0 | 43.7 | -5.0 | 32.8 | -5.0 |
| Total revenue | 1 588.0 | 1.7 | 1 694.5 | 8.5 | 1 226.2 | 7.6 |

1 *2022 Budget Review*
2 *2022 MTBPS*
3 Year-on-year percentage change: budgeted on previous year's actual outcome
4 Year-on-year percentage change: revised estimates on previous year's actual outcome
5 Year-on-year percentage change: actual outcome on previous year's actual outcome
6 Including non-tax revenue and extraordinary receipts
7 Southern African Customs Union

Components may not add up to totals due to rounding off and the exclusion of unclassified items.

Sources: National Treasury and SARS

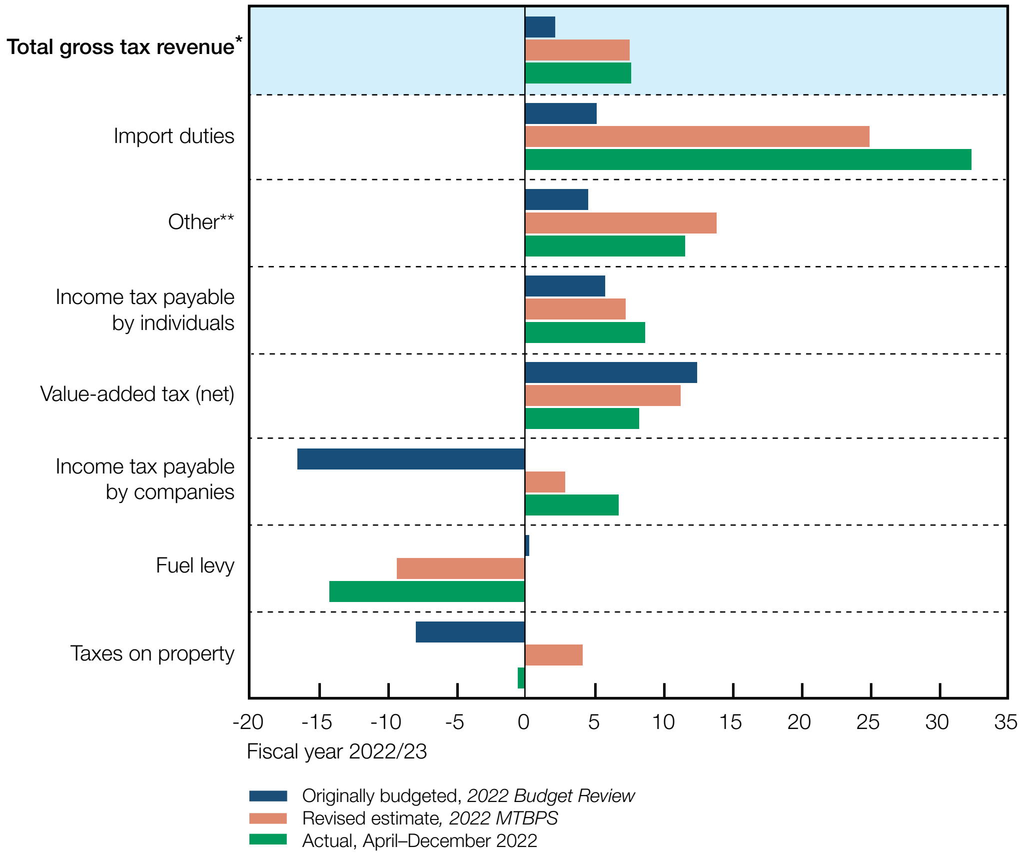
Taxes on income, profits and capital gains, which is the largest revenue category, increased by 8.3% year on year to R728.1 billion in the first nine months of fiscal 2022/23. This reflected a year-on-year increase of 8.7% in personal income tax (PIT) receipts to R426.4 billion as a result of higher pay-as-you-earn (PAYE) receipts, particularly from the finance, community services and manufacturing sectors. In addition, corporate income tax (CIT) receipts increased by 6.8% year on year to R271.5 billion due to collections from large business entities in the manufacturing, finance and transport sectors. The *2022 Budget Review*'s projected revenue of R894.3 billion from taxes on income, profits and capital gains for fiscal 2022/23 was revised higher to R970.4 billion in the *2022 MTBPS*.

Taxes on goods and services of R410.0 billion for the period April–December 2022 increased by 4.6% year on year. The increase resulted from net value-added tax (VAT) collections of R299.9 billion and other excise duties of R42.0 billion, which increased by 8.3% and 9.7% respectively. This tax category was affected by higher-than-expected VAT refunds and lower-than-expected fuel levy collections. The lower fuel levy collections were due to temporary relief measures introduced to soften the impact of higher domestic fuel prices on consumers. The *2022 Budget Review*'s projected revenue of R600.5 billion from taxes on goods and services for fiscal 2022/23 was revised slightly lower to R592.6 billion in the *2022 MTBPS.*

Taxes on international trade and transactions of R52.6 billion in the first nine months of fiscal 2022/23 increased markedly by 31.9% year on year. This reflected imports of, among other things, minerals (mainly refined petroleum products), electrical and other machinery, and vehicles. The *2022 Budget Review*'s projected revenue from taxes on international trade and transactions of R62.5 billion for fiscal 2022/23 was revised higher to R74.5 billion in the *2022 MTBPS.*

Composition of national government's gross tax revenue*

Percentage change over one year




* Before SACU payments

** Including secondary tax on companies, withholding tax on interest and other excise duties

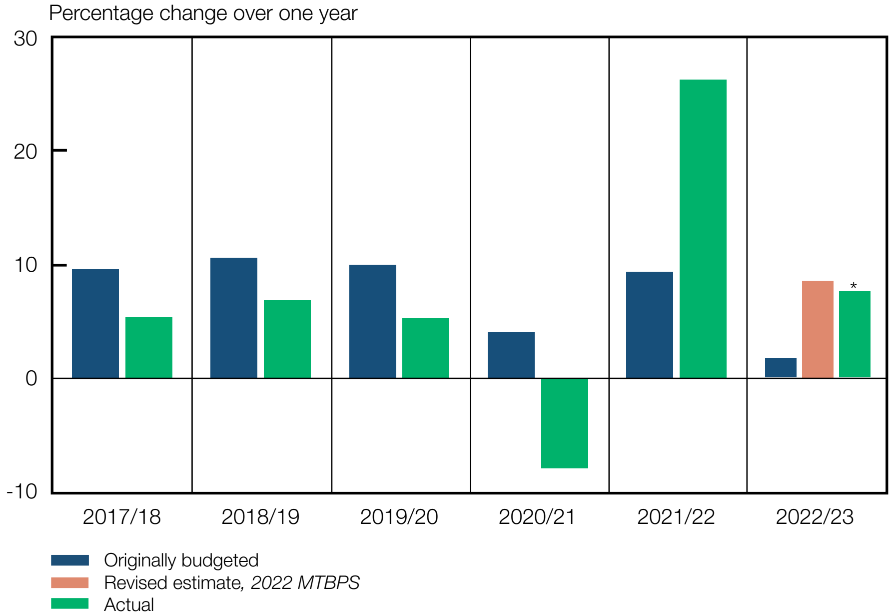
Sources: National Treasury, SARS and SARB

Other revenue, largely comprising non-tax revenue, decreased by 6.2% year on year to R36.5 billion for the period April–December 2022 due to lower rent received on land. The *2022 Budget Review* and the *2022 MTBPS* earmarked R43.7 billion for the Southern African Customs Union (SACU) for fiscal 2022/23. This amount was transferred in four equal tranches in April, July and October 2022 and in January 2023.

In the first 10 months of fiscal 2022/23, total revenue increased by 7.6% year on year to R1 340.7 billion as most tax categories continued to record strong growth.

Total expenditure by national government of R1 409.3 billion in the first nine months of fiscal 2022/23 was 3.8% more than in the same period of the previous fiscal year. The growth in spending was largely driven by transfers and subsidies by national government departments as part of voted expenditure as well as equitable share transfers to provinces and interest payments on national government debt (debt-service cost) as part of statutory amounts.

Revenue of national government




* April 2022–January 2023

Sources: National Treasury, SARS and SARB

The *2022 MTBPS* revised total expenditure slightly higher to R2 018.2 billion for fiscal 2022/23, from R1 975.3 billion in the *2022 Budget Review*. Total expenditure as a ratio of GDP was 27.8% in the first nine months of fiscal 2022/23 – lower than the 28.7% recorded in the same period of the previous fiscal year.

National government expenditure in fiscal 2022/23

| Expenditure item | Originally budgeted[1] Fiscal 2022/23 | | Revised estimates[2] Fiscal 2022/23 | | Actual Apr–Dec 2022 | |
|---|---|---|---|---|---|---|
| | R billions | Percentage change[3] | R billions | Percentage change[4] | R billions | Percentage change[5] |
| Voted expenditure | 1 057.0 | 2.2 | 1 094.5 | 5.8 | 771.8 | 0.8 |
| *Of which*: Transfers and subsidies | 755.3 | 8.9 | 755.4 | 8.9 | 559.6 | 5.8 |
| Current payments | 260.7 | 1.8 | 263.1 | 2.8 | 189.3 | 2.4 |
| Payments for capital assets | 15.5 | 17.4 | 16.9 | 27.8 | 9.2 | 31.1 |
| Payments for financial assets | 25.6 | -64.3 | 59.2 | -17.4 | 13.7 | -69.3 |
| Statutory amounts[6] | 918.2 | 7.7 | 923.7 | 8.3 | 637.5 | 7.6 |
| *Of which*: Provincial equitable share | 560.8 | 2.9 | 560.8 | 2.9 | 420.6 | 5.1 |
| Interest on debt | 301.7 | 12.6 | 307.5 | 14.8 | 188.0 | 14.5 |
| General fuel levy | 15.3 | 4.9 | 15.3 | 4.9 | 10.2 | 4.9 |
| Total expenditure | 1 975.3 | 4.7 | 2 018.2 | 7.0 | 1 409.3 | 3.8 |

1 *2022 Budget Review*
2 *2022 MTBPS*
3 Year-on-year percentage change: budgeted on previous year's actual outcome
4 Year-on-year percentage change: revised estimates on previous year's actual outcome
5 Year-on-year percentage change: actual outcome on previous year's actual outcome
6 Including extraordinary payments
Components may not add up to totals due to rounding off and the exclusion of unclassified items.

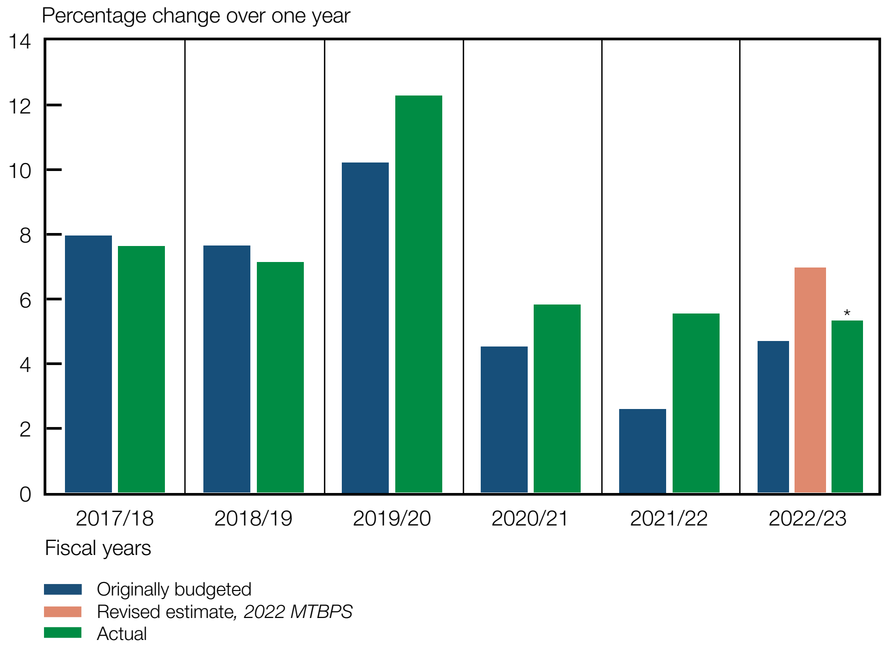
Source: National Treasury

Total voted expenditure by national government departments increased marginally by 0.8% year on year to R771.8 billion for the period April–December 2022. This mainly reflected transfers and subsidies of R559.6 billion, current payments of R189.3 billion and payments for capital assets of R9.2 billion. By contrast, payments for financial assets declined by 69.3% year on year to R13.7 billion – inclusive of previous payments to Eskom (R11.0 billion), South African Airways (R1.6 billion) and Denel (R201 *million*). The *2022 Budget Review*'s projected voted expenditure of R1 057.0 billion for fiscal 2022/23 was revised slightly higher to R1 094.5 billion in the *2022 MTBPS.*

Equitable share transfers by national government to provinces – the main source of provincial government revenue – increased by 5.1% year on year to R420.6 billion in the first nine months of fiscal 2022/23, and the projected amount of R560.8 billion for fiscal 2022/23 remained broadly unchanged in the *2022 MTBPS*. Two equal tranches totalling R10.2 billion were transferred to metropolitan municipalities as their share of the general fuel levy in August and December 2022.

Interest payments on national government debt increased notably by 14.5% year on year to R188.0 billion for the period April–December 2022, in line with the continued increase in the outstanding balance of national government debt. Government envisaged a total debt-service cost of R301.7 billion in the *2022 Budget Review* for fiscal 2022/23, which was revised higher to R307.5 billion in the *2022 MTBPS*.

Expenditure by national government



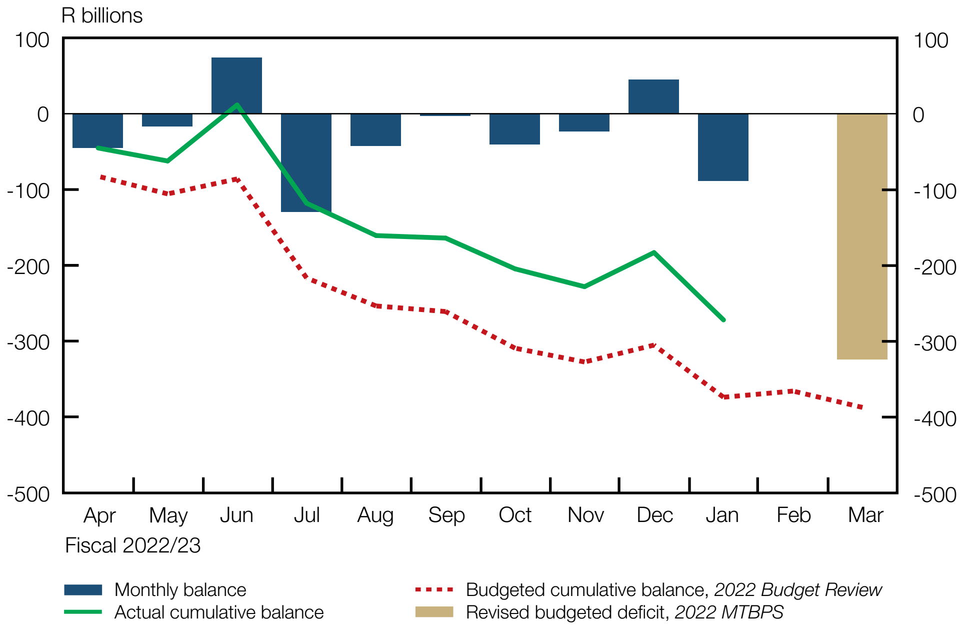

* April 2022–January 2023

Sources: National Treasury, SARS and SARB

In the first 10 months of fiscal 2022/23, total expenditure increased by 5.3% year on year to R1 612.5 billion.

National government revenue and expenditure yielded a cash book deficit of R183.1 billion in the first nine months of fiscal 2022/23 – R36.1 billion less than in the same period of fiscal 2021/22. The *2022 Budget Review*'s projected cash book deficit of R387.2 billion for fiscal 2022/23 was revised lower to R323.7 billion in the *2022 MTBPS*. In the first 10 months of fiscal 2022/23, national government's cash book deficit was R271.9 billion, some R13.2 billion less than a year earlier.

Cash book balance of national government




Sources: National Treasury, SARS and SARB

National government's *surplus* on its primary balance of R5.0 billion (0.1% of GDP) in April–December 2022 followed a *deficit* of R54.9 billion (1.2% of GDP) in the same period a year earlier. The *2022 Budget Review*'s primary deficit of R85.4 billion (1.3% of GDP) was revised lower to R16.0 billion (0.2% of GDP) in the *2022 MTBPS*.

### National government financing

R billions

| Item or instrument | Actual Apr–Dec 2021 | Actual Apr–Dec 2022 | Originally budgeted[1] Fiscal 2022/23 | Revised estimates[2] Fiscal 2022/23 |
|---|---|---|---|---|
| Cash book balance[3] | -219.1 | -183.1 | -387.2 | -323.7 |
| Cash flow balance[4] | -213.3 | -213.7 | ... | ... |
| *Plus:* Cost/profit on revaluation of foreign debt at redemption[5] | -1.9 | -8.6 | -8.8 | -8.6 |
| Accrual adjustments | 60.3 | 108.2 | ... | ... |
| Net lending/borrowing requirement[6] | -154.9 | -114.1 | -396.1 | -332.4 |
| Treasury bills and short-term loans[7] | -8.0 | -25.6 | 0.0 | -3.4 |
| Domestic bonds[7] | 164.4 | 178.4 | 249.1 | 227.8 |
| Foreign bonds and loans[7] | 18.2 | 51.8 | 40.8 | 66.7 |
| Change in available cash balances[8] | -19.8 | -90.4 | 106.2 | 41.3 |
| Total net financing | 154.9 | 114.1 | 396.1 | 332.4 |

1 *2022 Budget Review*
2 *2022 MTBPS*
3 Deficit (-)/surplus (+)
4 The cash flow deficit includes extraordinary receipts and payments, and differs from the cash book deficit.
5 Cost (+)/profit (-)
6 Net lending (+)/net borrowing (-)
7 Net issuance (+)/net redemption (-)
8 Increase (-)/decrease (+)
Components may not add up to totals due to rounding off.
... Not available

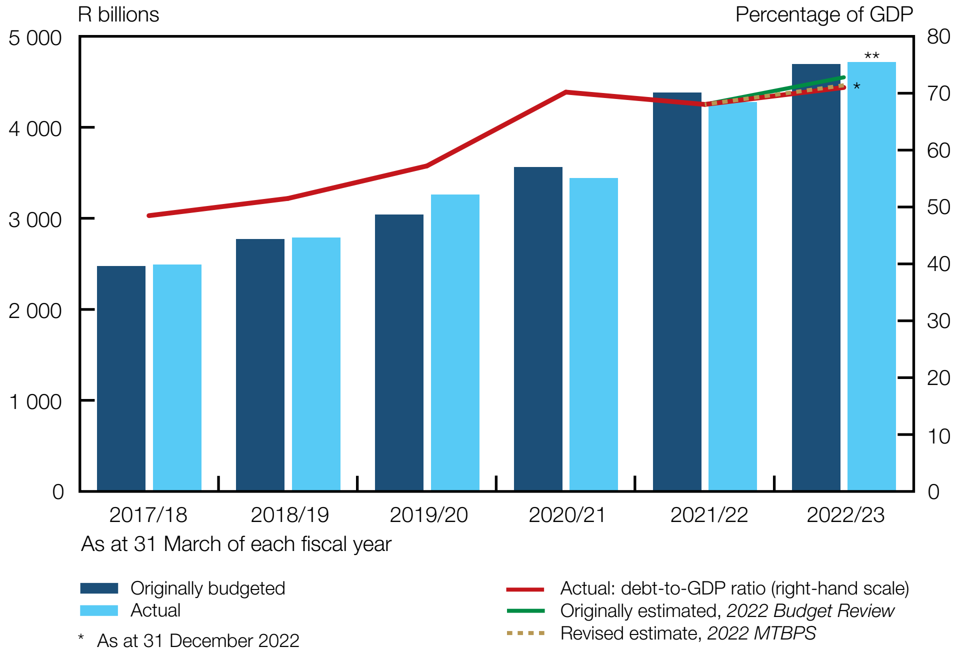
Sources: National Treasury and SARB

National government's cash flow deficit increased marginally from R213.3 billion in April–December 2021 to R213.7 billion in April–December 2022. After accounting for the cost of revaluation of foreign debt at redemption and accrual adjustments, the net borrowing requirement of national government amounted to R114.1 billion in the first nine months of fiscal 2022/23.

The net borrowing requirement of national government was mostly financed in the domestic financial markets through the net issuance of long-term government bonds of R178.4 billion in the first nine months of fiscal 2022/23. Over the same period, government's net issuance of foreign bonds and loans amounted to R51.8 billion. By contrast, TBs and short-term loans from the CPD recorded a net redemption of R25.6 billion while national government's available cash balances increased by R90.4 billion.

National government's total gross loan debt of R4 714.3 billion as at 31 December 2022 reflected a year-on-year increase of R442.8 billion as both domestic and foreign debt increased. Domestic debt increased by 9.3% year on year to R4 190 billion as at 31 December 2022 and accounted for 88.9% of total gross loan debt. The outstanding balance of foreign debt increased by 19.8% year on year to R525 billion. The *2022 MTBPS* revised gross loan debt higher to R4 752 billion for fiscal 2022/23, and in the first nine months of fiscal 2022/23 gross loan debt already accumulated to 99.2% of this revised estimate. At the end of December 2022, national government's gross loan debt as a percentage of GDP of 71.0% was slightly lower than the revised estimate of 71.4% in the *2022 MTBPS* for the full fiscal year.

Gross loan debt of national government

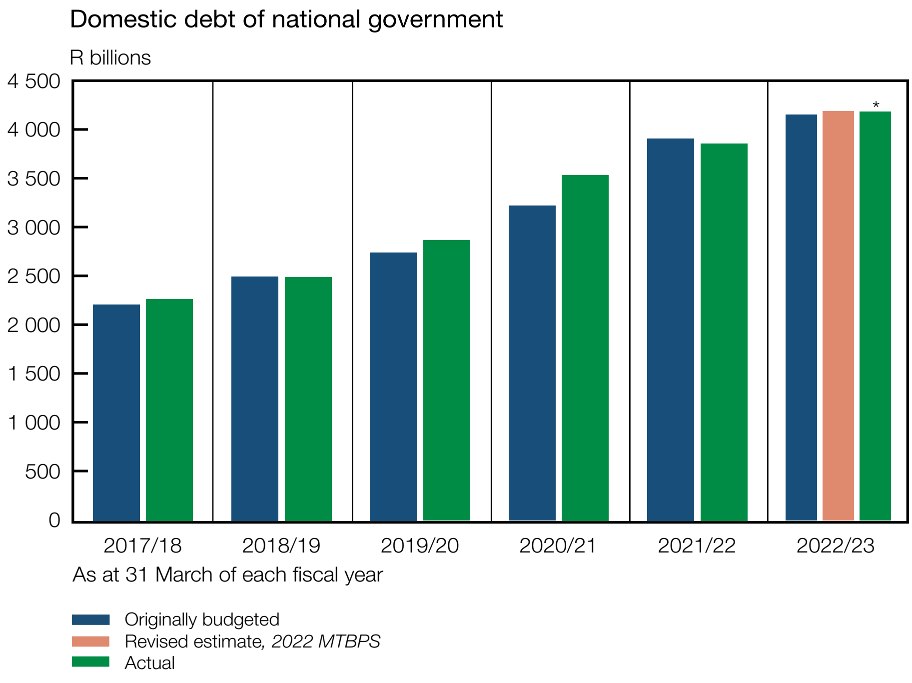



* As at 31 December 2022
** As at 31 January 2023

Sources: National Treasury, Stats SA and SARB

The increase in national government's domestic debt could be attributed to a 9.2% year-on-year increase in the net issuance of domestic marketable debt to R4 165 billion as at 31 December 2022, which accounted for 99.4% of the total increase in domestic debt. The non-marketable domestic debt of R24.0 billion as at 31 December 2022 was 30.9% higher than a year earlier. The *2022 MTBPS* revised gross domestic debt slightly higher to R4 193 billion compared with the original estimate of R4 159 billion.

National government's foreign debt (marketable and non-marketable) of R525 billion as at 31 December 2022 was R86.6 billion higher than a year earlier. This increase could be attributed to the net issuance of foreign bonds and loans as well as exchange rate revaluation effects.



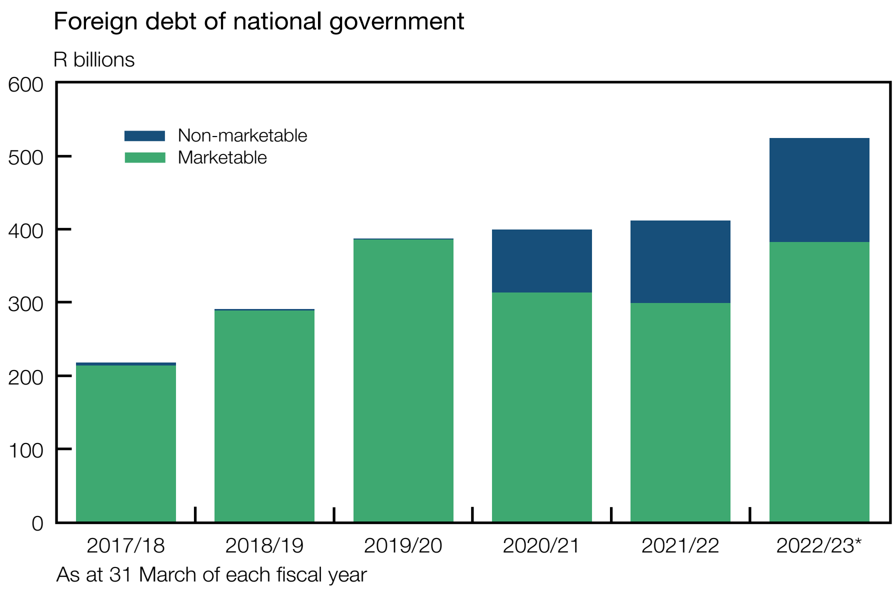

* As at 31 December 2022

Sources: National Treasury and SARB

Foreign marketable bonds of R383 billion as at 31 December 2022 accounted for the largest share of total foreign debt, at 73.0%. The increase reflected the issuance of two new notes (*TY2/110* and *TY2/111*) in the international financial markets in April 2022, which raised a total of R45.1 billion (US$3 billion). However, national government redeemed foreign loans to the value of R15.8 billion (US$1 billion) in May 2022. Of the total outstanding balance of marketable foreign bonds as at 31 December 2022, R59.5 billion (15.5%) will mature in one to three years.

Non-marketable foreign debt increased to R142 billion as at 31 December 2022, or by 27.7%, compared with the same period a year earlier. The increase could be ascribed to borrowing from international financial institutions through four loans between December 2021 and December 2022, with the US dollar-denominated debt totalling R12.6 billion (US$850 million) and the euro-denominated debt totalling R12.2 billion (€691 million).

The *2022 MTBPS* revised national government's total foreign debt higher to R559 billion for fiscal 2022/23, or 4.8% more than the original estimate of R533 billion in the *2022 Budget Review.*

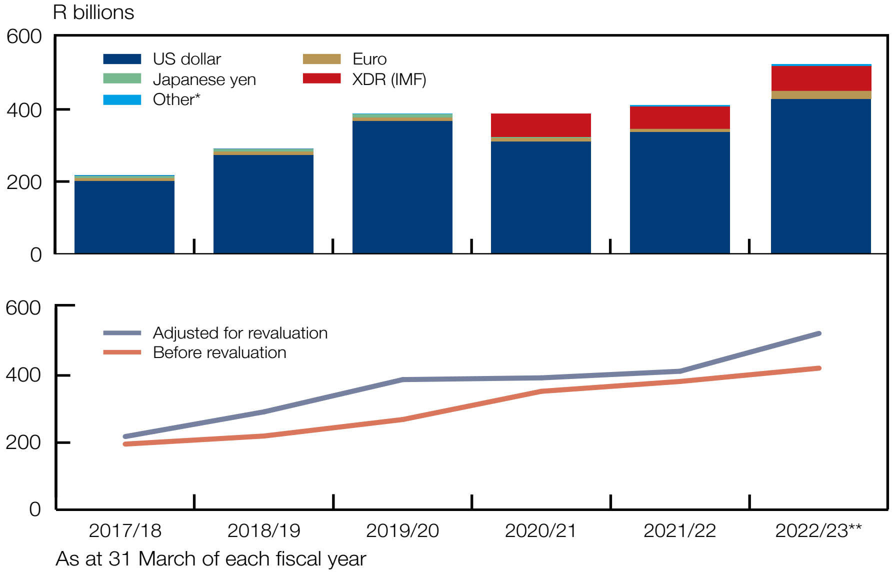



* As at 31 December 2022

Sources: National Treasury and SARB

National government's foreign debt of R421 billion increased to R525 billion as at 31 December 2022 after accounting for exchange rate revaluation effects. US dollar-denominated debt accounted for the largest share of the total outstanding balance of foreign debt at R429 billion (82.6% of the total) followed by special drawing rights (SDRs) at R69.0 billion (13.3% of the total).

Currency composition of national government's foreign debt



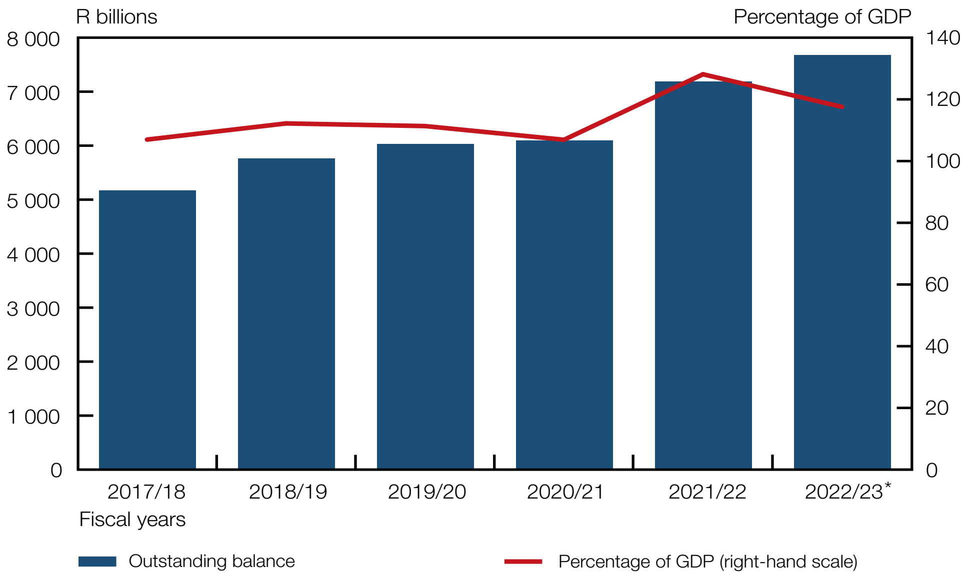

* Including the British pound, Swedish krona and South African rand
** As at 31 December 2022
Sources: National Treasury and SARB

43 The public sector in South Africa comprises central government (national government, extra-budgetary institutions and social security funds), provincial government and local government, which together render the general government. The last-mentioned, combined with both financial and non-financial public corporations, renders the total public sector.

## Total public sector debt[43]

The preliminary consolidated gross public sector debt of South Africa increased to R7 680 billion (117.6% of GDP) as at 30 September 2022 – R147.1 billion more than a year earlier. After netting the individual debt instruments against their corresponding financial assets, the consolidated *net* public sector debt of R5 478 billion (83.9% of GDP) as at 30 September 2022 was lower than the R5 558 billion (91.0% of GDP) a year earlier.

Total consolidated public sector debt

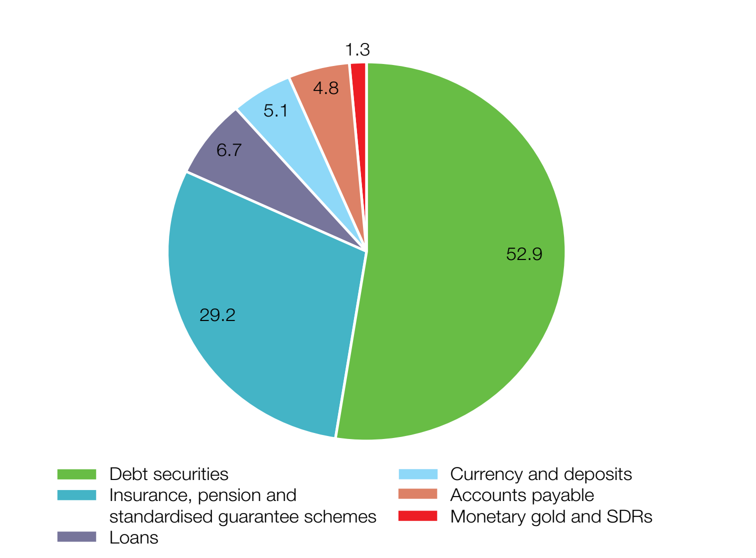



* As at 30 September 2022
Source: SARB

The outstanding consolidated public sector debt securities in the domestic and international markets amounted to R4 066 billion as at 30 September 2022. This represented an increase of R30.0 billion compared with the same period a year earlier. Debt securities were the largest contributor to total consolidated public sector debt as at 30 September 2022, at 52.9%, while fully funded pension liabilities accounted for 29.2%.

Composition of consolidated gross public sector debt as at 30 September 2022

Per cent




Source: SARB

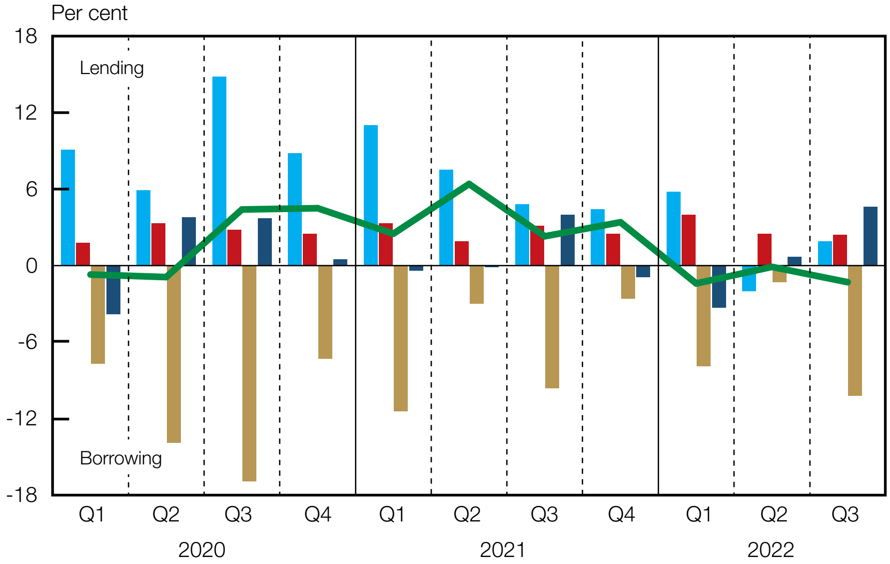
44 The analysis in this section is based on the experimental statistics compiled for South Africa's integrated economic accounts (IEA) as part of the Group of Twenty (G20) Data Gaps Initiatives (DGI-2) and is subject to further revision. See pages E–2 to E–12 in the experimental tables section in this edition of the *Quarterly Bulletin.*

# Integrated economic accounts[44]

## Current and capital account

South Africa's net borrowing increased to R21.5 billion (1.3% of GDP) in the third quarter of 2022 from R881.9 *million* in the second quarter. The larger net borrowing position resulted from a significant increase in gross capital formation which outweighed the increase in gross saving. After three consecutive quarters of net borrowing, South Africa's cumulative net borrowing amounted to R44.2 billion in the first three quarters of 2022 compared with net lending of R174.0 billion in the corresponding period of the previous year.

South Africa's net lending/borrowing as a ratio of gross domestic product




* Including non-profit institutions serving households
Net lending (+)/borrowing (-)

Source: SARB

Financial corporations and households maintained net lending positions in the third quarter of 2022, whereas non-financial corporations reverted from net borrowing in the second quarter to net lending in the third quarter. However, general government remained a net borrower.

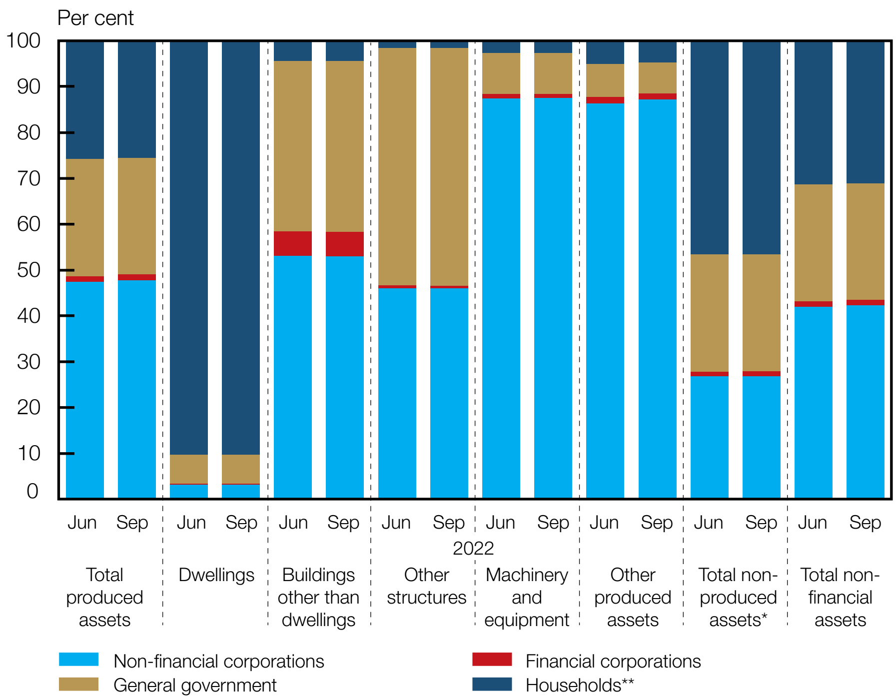
## Non-financial balance sheet and accumulation account

The market value of total non-financial assets amounted to R18.2 trillion as at 30 September 2022, with non-financial corporations holding 42.2%, households holding 31.2% and general government holding 25.4%. Financial corporations held only 1.2%, mainly in the form of buildings other than dwellings. As at 30 September 2022, households owned 90.3% of all dwellings. General government and non-financial corporations held the majority of other structures, such as roads, bridges and harbours, at 51.8% and 45.9% respectively, while 87.4% of total machinery and equipment was held by non-financial corporations.

The market value of total produced fixed assets increased by 1.6% to R12.4 trillion in the three months to 30 September 2022. Gross fixed capital formation of R239.6 billion and consumption of fixed capital of R231.2 billion resulted in an increase of R8.4 billion in net capital formation. Revaluation amounted to R186.2 billion in the third quarter of 2022, with the market value of machinery and equipment increasing by R74.6 billion (3.0%). This, together with the marginal increase in net capital formation, mainly contributed to the increase in the market value of total produced fixed assets.

Households owned 46.6% of non-produced assets (only land) as at 30 September 2022, with the remainder held in almost equal proportion between non-financial corporations and general government.

Institutional sector non-financial asset holdings




* Land only
** Including non-profit institutions serving households

Source: SARB

## Financial balance sheet and accumulation account

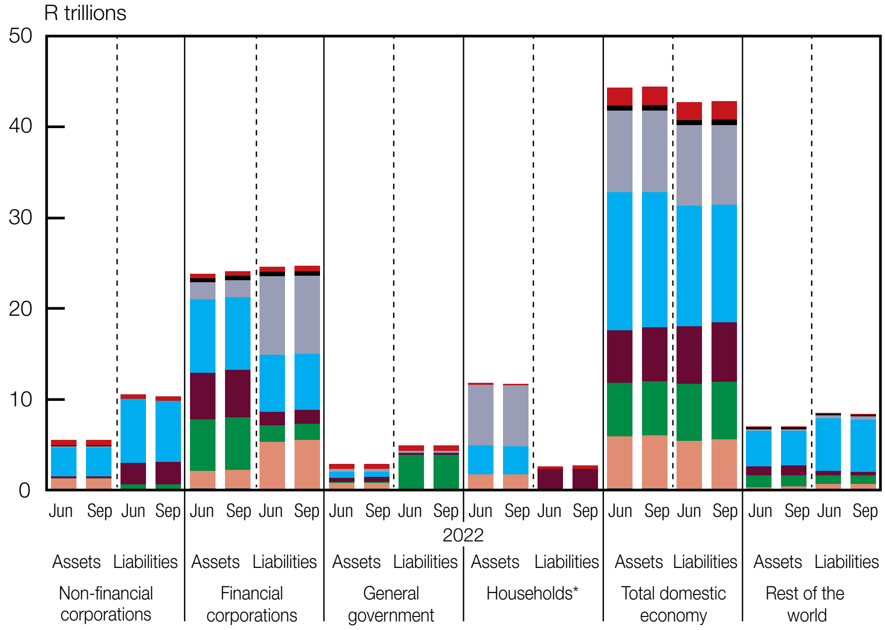
The market value of total financial assets and total liabilities held by the domestic institutional sectors increased by R0.1 trillion and R1.1 billion respectively to R44.4 trillion and R42.8 trillion respectively as at 30 September 2022. The increase in the market value of both total financial assets and total liabilities resulted largely from increases in the value of currency and deposits as well as loans. This was despite a significant decline in the value of equity and investment fund shares/units, mainly due to the lower prices of shares listed in South Africa.

Financial corporations were the only institutional sector that contributed positively to growth in total financial assets, as interest receipts on government debt securities (as reflected in deposit holdings) and the acquisition of debt securities boosted their contribution to total financial assets from 54.2% on 30 June 2022 to 54.6% on 30 September 2022. The increase in the value of currency and deposits together with steady growth in loans increased their share of total liabilities from 57.6% to 58.1%.

The share of total financial assets held by households declined from 26.7% as at 30 June 2022 to 26.5% as at 30 September 2022, while that of total liabilities increased from 6.1% to 6.2% due to higher demand for loans. Over the same period, non-financial corporations' contribution to total financial assets decreased from 12.5% to 12.4% due to a decline in the value of unlisted share holdings, while their contribution to total liabilities decreased from 24.8% to 24.1% due to a decline in listed shares exposure with households and the rest of the world (ROW).

General government's share of total financial assets decreased from 6.6% as at 30 June 2022 to 6.5% as at 30 September 2022, as interest payments on government bonds reduced its deposit holdings with monetary institutions. National government's funding activity continued to be dominated by the issuance of domestic bonds and TBs despite its lower share of 11.6% of total liabilities as at 30 September 2022, which resulted from revaluations.

Market value of total financial assets and liabilities by institutional sector and financial instrument




* Including non-profit institutions serving households

Source: SARB

The market value of the ROW's holdings of South African financial assets decreased marginally from R7.1 trillion on 30 June 2022 to R7.0 trillion on 30 September 2022 following the lower value of equity and investment fund shares/units. At the same time, South Africa's total foreign assets increased marginally from R8.4 trillion to R8.5 trillion as the value of South African holdings of both currency and deposits as well as debt securities increased.

For the period under review, revaluations were the main contributor to the overall increase in the market value of both total financial assets and total liabilities in the domestic economy. Revaluations led to an increase of R0.9 trillion in the value of the various financial instruments, most notably in currency and deposits as well as loans. This was partly offset by a decline in transactions to the value of R0.8 trillion.

An analysis of the from-whom-to-whom market value of financial asset and liability stock positions between the domestic institutional sectors and the ROW as at 30 September 2022[45] shows that financial corporations were the only institutional sector with a net asset position in the third quarter of 2022. This was due to claims of R9.8 trillion and R5.1 trillion against themselves and the ROW respectively. Similarly, financial corporations had the largest net liability position, mainly against themselves, at R9.8 trillion, and against households, at R9.0 trillion.

45 See page E–11 in the experimental tables section in this edition of the *Quarterly Bulletin.*

# The seasonal adjustment methodology applied to economic statistics by the South African Reserve Bank

by S Knox and M Smal

## Introduction

Economic statistics are often influenced by seasonal variations which impact on the activity being measured. The seasonal adjustment of economic statistics removes the seasonal component in the measured activity to render historically comparative observations for analysis. The seasonal adjustment process is expected to treat and eliminate patterns in an economic time series that are usually repeated annually and mask underlying movements in a time series. Seasonal adjustment should not be applied in instances where a time series does not display any recurring seasonal pattern.

This article defines seasonality in economic statistics and presents the seasonal adjustment methodology applied by the Economic Statistics Department (ESD) of the South African Reserve Bank (SARB). All statistics published in the statistical tables section of the SARB's *Quarterly Bulletin* which are seasonally adjusted by the SARB are adjusted according to this methodology.

## Time series decomposition

A time series is a sequence of observations recorded at regular, consecutive time intervals or frequencies such as daily, monthly, quarterly or annually. Time series analysis is performed to describe trends in a time series as well as relationships or correlations between different time series, and also to predict or forecast the future values of a time series. For economic analysis purposes, a time series can be decomposed into its separate components. An economic time series $Y_t$ can be divided into the following four components:

$$Y_t = T_t \,.\, C_t \,.\, S_t \,.\, I_t$$

a Trend component ($T_t$):

The long-term movement that reflects the general direction of the time series.

b Cyclical component ($C_t$):

A sequence of repeated, but non-periodic, smooth fluctuations around the long-term trend, characterised by alternating periods of expansion and contraction. The duration of these fluctuations depends on the nature of the time series but, on average, these cycles last between three and five years, and generally coincide with the business cycle.

c Seasonal component ($S_t$):

Seasonal fluctuations that are repeated on a regular basis within a calendar year, with the timing, direction and magnitude more or less stable and predictable.

d Irregular component ($I_t$):

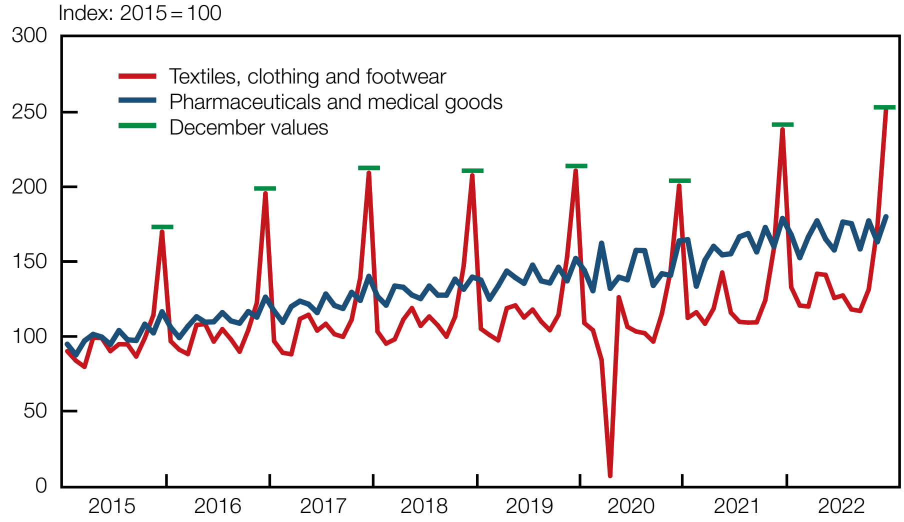
Irregular and unpredictable fluctuations not covered by the previous three components, thus representing the residual movement. This component is often referred to as 'white noise' and has a random character. Some irregularity is to be expected as no two periods will be exactly the same due to various factors. However, these movements should be relatively small and not dominant. Although the irregular component is sometimes mistakenly seen as outliers, the two are not the same; an irregular component is of a smaller magnitude than an outlier.

## Seasonality and its causes

Seasonality refers to a pattern or movement in an economic times series that is consistently repeated at the same time (e.g. every month or quarter) and with more or less the same magnitude or intensity every calendar year. Some industrial sectors' economic activity is more seasonal than others', for instance in agriculture where weather and seasonal patterns affect the intensity of that industry's activities. Seasonality is influenced by factors other than the economy, and mostly stems from annual climate changes and conventions such as religious, social and public events which are repeated annually and have an impact on economic activity.

To illustrate a difference in seasonality, two subcategories of retail trade sales in South Africa are compared in Figure 1. Although the nominal value of both indicators increases every December, that of textiles, clothing and footwear increases to a greater extent than that of pharmaceuticals and medical goods. This shows that the seasonal impact of the annual December holidays and Festive Season is much larger on the former category.

Figure 1 Nominal retail trade sales (not seasonally adjusted)




Source: Stats SA

There are four major causes of seasonality in an economic time series:

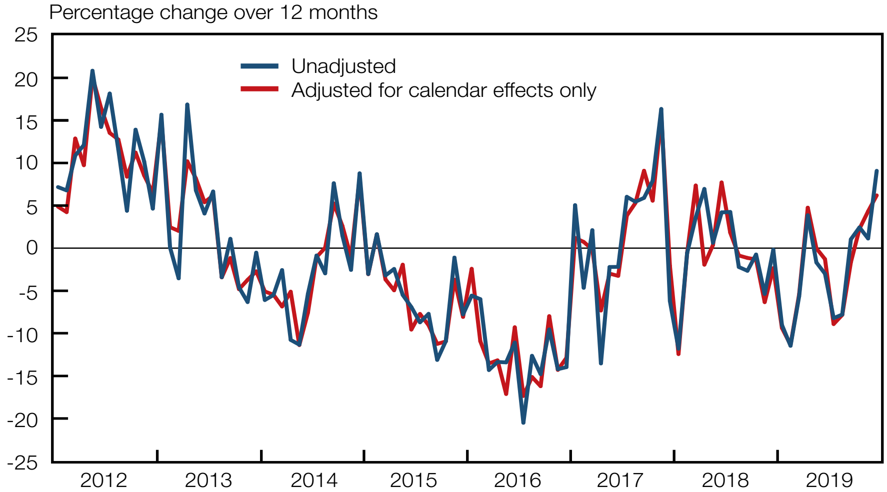
a. seasons with colder or warmer weather impacting on, for example, the sales of heaters and the type of clothing apparel, or the planting and harvest times in the agricultural sector;
b. major institutional deadlines such as academic years or the end of a tax year;
c. expectations which result in an increase in certain activities occurring in a specific month of each year, such as the registration of new vehicles at the beginning of a new calendar year; and
d. the composition of the calendar, which includes the number of working days per month, Easter (which is a moving holiday period) and public holidays.

The first three causes are pure seasonal factors, while the fourth is referred to as calendar effects, which are treated separately and differently from distinct seasonal factors. Calendar effects are related to the number of working and trading days in a particular month or quarter, and include Easter and other public holidays which can have an impact on economic activity.

Seasonal adjustment is the process of smoothing data by means of statistical filters to isolate the seasonal effects with the purpose of identifying the underlying data patterns. Removing the seasonal and calendar effects assists in determining whether a time series value truly increased or decreased due to economic factors, or if it was just momentarily caused by an exogenous factor such as a flood or industrial action. Neglecting to adjust for calendar effects can lead to the incorrect interpretation of the movements in an economic time series. To circumvent seasonal adjustment, some economic analysts focus on the year-on-year growth rates in a time series. However, this approach ignores the possible calendar effects. To illustrate this point, the year-on-year rates of change in the unadjusted (actual) number of new passenger vehicle sales and the adjusted time series where only calendar effects are removed are shown in Figure 2. The latter is clearly different (exhibiting less volatility) than the unadjusted time series, emphasising the importance of removing calendar effects. *When year-on-year rates of change are calculated, the data should be adjusted for calendar effects but not for seasonal effects.*

Figure 2 Number of new passenger vehicle sales*

Percentage change over 12 months




* Data only up to the end of 2019 in order to avoid COVID-19 lockdown distortions

Sources: NAAMSA and SARB

## Outliers

Outliers are extreme values that can distort the seasonal adjustment of a time series as their magnitudes are larger than those of irregular movements. Outliers are either a single or a few consecutive abnormal data points in a time series which are caused by exogenous factors such as strikes, droughts, floods, pandemics and data processing errors. They can occur at different periods throughout the time series, and more than one type of outlier can be present in a specific time series. *Outliers should therefore be temporarily removed during the seasonal adjustment process and then added back to the seasonally adjusted series.* There are various types of outliers (see Table 1).

Table 1 Time series component classification of calendar effects and outliers

| Description | Original series ($Y_t$) | Trend cycle ($T_t / C_t$) | Seasonality ($S_t$) | Irregular ($I_t$) | Seasonally adjusted series |
|---|---|---|---|---|---|
| Trading days* | X | | X | | |
| Easter* | X | | X | | |
| Other moving holidays* | X | | X | | |
| Additive outlier** | X | | | X | X |
| Transitory change** | X | | | X | X |
| Level shift** | X | X | | | X |
| Ramp** | X | X | | | X |
| Seasonal outlier/seasonal level shift** | X | | X | | |
| Re-allocation outlier** | X | | | X | X |

* Calendar effects

** Outliers

The time series components under which each of the calendar effects and outliers is categorised are shown in Table 1. *Note that all outliers, except seasonal outliers and level shifts, should still be part of the seasonally adjusted time series.*

## Seasonal adjustment software

1 JDemetra+ is an open-source application available free of charge. It includes training manuals, guidelines and technical support from Eurostat. The latest version is JDemetra+ V2.2.4, available at https://ec.europa.eu/eurostat/cros/content/download_en.

A time series can be seasonally adjusted with various software packages, including EViews, JDemetra+[1], Python, R, SAS and Win-X. All of these packages follow the same basic methodology but differ in terms of options to select and refine the specifications and test results.

The SARB uses JDemetra+, which was developed and released by Eurostat in 2012 to promote standardisation across European Union countries. This software consists of a collection of reusable and extensible Java components, and is regularly updated and improved by Eurostat with new functionalities.

JDemetra+ provides two methods of seasonal adjustment, namely X13 ARIMA-SEATS (X13) and TRAMO-SEATS. Initially, the X13 method was more widely used due to its better diagnostics and smaller revisions. However, recently TRAMO-SEATS has become more popular because it can accommodate a change in the seasonal pattern better than X13.

## Statistical processes applied to seasonally adjust a time series

The first step in the seasonal adjustment process is to fit a RegArima (regression and autoregressive integrated moving average (ARIMA)) model to the time series, also known as the 'pre-treatment' of the time series. By applying a regression to the time series, outliers are identified and eliminated, while the series is also treated for calendar effects. The ARIMA function assists in obtaining estimated values for the pre- and post-sample periods, which are required to avoid the so-called 'end-point problem' encountered when trend and seasonal filters need to be fitted to the time series. The statistical tests for the ARIMA results are in the form of AIC (Akaike Information Criterion) and AICC (a second order estimate version of the AIC, which corrects for smaller sample sizes) values. The model with the lowest AIC/AICC value is preferred. During this process, the coefficients of the regression and ARIMA model are generated.

Following the 'pre-treatment' of the time series, an iterative process is applied to separate it into the different components (i.e. $T_t$, $C_t$, $S_t$ and $I_t$). During this process, the time series that is obtained after the RegArima treatment is considered to be the 'original' time series.

Firstly, the trend and cyclical components are dealt with in the same step as they are both separated by applying moving averages to the original time series. In the first round, this is a centred 12-term moving average. In subsequent rounds, a Henderson filter of various lengths is used. These lengths are determined by the irregular-to-cyclical (I/C) ratio.

Following the removal of the trend and cyclical components, the seasonal component of the time series is isolated by using a seasonal filter which focuses on a specific month or quarter, spanning over the whole selected sample period. These can vary from a 3x3- to a 3x15-term filter. The more the unmodified seasonal components fluctuate from year to year, the broader the term filter will be. However, if this fluctuation is not a gradual shift but a relatively quick change, a narrower base is required to correctly record the actual seasonal influences, especially towards the latter part of the time series. Each month or quarter could be treated with its own filter specification. For instance, January could have a 3x5-term seasonal filter, while August could have a 3x9-term seasonal filter.

It is now possible to isolate the irregular component of the time series and adjust for it. This is done by calculating the standard deviation of the time series and multiplying it by 1.5 and 2.5 (the default sigma limits). If an original value of the time series is more than 2.5 standard deviations away from the mean, it is assigned the value of 0. If it falls between 1.5 and 2.5, the weight will vary between 0 and 1 depending on where it falls within the range. If the value is smaller than

1.5 times the standard deviation, the full observation is included. These sigma limits can be manually changed in JDemetra+ to make the specifications either more or less strict, and the weighting structure is then adjusted accordingly. In exceptional circumstances, judgement can be applied to deviate from the default limits to incorporate specialist subject-matter knowledge and experience of the specific time series.

Through this, the time series has now undergone its first round of filtering. The steps already described will be subject to three iterations. The first round of the iterative process uses fixed filters, and JDemetra+ generates the results presented in Tables B1 to B20.[2] The length of the filters used in the second and third rounds will be determined by various statistical tests. The second round's results are shown in Tables C1 to C20, while round three's results are indicated in Tables D1 to D18. After the third round of filtering, the seasonal factors have been finalised, and all the results will be available for evaluation.

The aforementioned process can be executed by either a multiplicative or an additive procedure, which will depend on the stationarity[3] of the time series. When a series is non-stationary, a multiplicative process is applied, while an additive process is applied for a stationary variance or to any time series that contains negative or zero values.

## Test results

Various statistical tests are conducted to determine the quality of the seasonal adjustment results obtained. The most frequently used test results are listed below:

a Sliding span analysis:
One way to analyse the results of the seasonal adjustment process is to conduct a sliding span analysis for a time series that stretches over a long period of time. This is done over sequential time periods. These tests show how the seasonal factors change over time (moving seasonality) and how their month-to-month growth rates change.[4]

b Statistical tests of pre- and post-adjusted time series:
- auto-correlation at seasonal lags;
- Friedman (non-parametric);
- Kruskall-Wallis (non-parametric);
- spectral peaks;
- periodogram; and
- seasonal dummies.

More emphasis is placed on the results of the first two tests. If the pre-adjusted time series returns a 'YES' result and the post-adjusted time series a 'NO' result, there was definite seasonality in the original time series that has successfully been removed.

c Contribution of the seasonal component to total variation:
JDemetra+ produces an output table showing the relative contributions of the cyclical, seasonal, irregular, pre-adjustment (outliers) and calendar effect to the stationary portion of the variance in the original time series. The seasonal part should be the main contributor for the seasonality to have been successfully removed.

d M statistics (quality measures):
There are 11 M statistics generated that measure various aspects of the time series. The weighted average of these is called the Q-statistic, or quality measures. The value of the M statistics should be less than 1 for the results to be accepted. The M7 value, which tests the amount of moving seasonality relative to the amount of stable seasonality, is the most important of the individual test results. It also has the largest weight in the Q-statistic.

e Spectral analysis:
A graphical spectral analysis tool is also available in JDemetra+, with the spectral peaks indicating whether seasonality is present in the original time series.

2 The results of the seasonal adjustment process are presented in Tables B, C and D, as generated by JDemetra+.

3 Stationarity refers to the statistical properties of a time series. For a stationary time series, the mean, variance and auto-correlation structure do not change over time.

4 An adjustment process is seen as unstable if, for a specific month or quarter (e.g. every February or every first quarter), the maximum estimated value *minus* the minimum estimated value *divided by* the minimum value is larger than 0.03. These maximum and minimum values are used for all the time spans tested.

In most instances, all of the aforementioned test outcomes should indicate similar results on whether the adjustment is statistically acceptable or not. However, if there are contradicting test results, judgement and expert knowledge of the original time series will inform the final decision as to whether the results should be accepted or rejected.

## Improving the test results

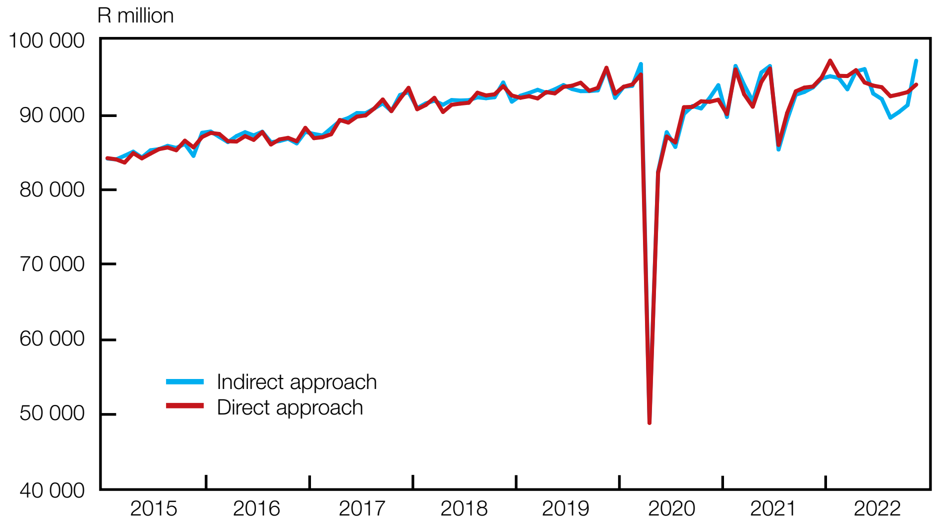
Various interventions are available in JDemetra+ to improve test results, including:

- changing the duration of the period that is subject to adjustment while considering structural breaks;
- changing the length of the Henderson filter;
- changing the length of the seasonal filters; and
- increasing or decreasing the sigma limits applied to the irregular observations.

## Direct versus indirect seasonal adjustment

When the components of an economic time series are summed to a total (e.g. total retail trade sales and its subcomponents), the question arises whether the total should be adjusted independently (directly) or if it would be preferable to sum the various subcomponents' seasonally adjusted time series to obtain the seasonally adjusted total (indirectly). The decision depends on various factors, including the structure of the time series as well as the seasonal patterns of the individual time series. If they all have a similar pattern, the indirect approach would be preferable. However, the total should still be tested for the presence of residual seasonality and, if present, the total should rather be directly adjusted. As shown in Figure 3, the results can differ significantly between the direct and indirect methods.

Figure 3 Seasonally adjusted real retail trade sales




Sources: Stats SA and SARB

## Annual totals

Due to possible calendar effects, the annual totals of the original time series and the sum of the monthly or quarterly seasonally adjusted time series might differ somewhat. Despite this difference, the outcome is still considered statistically sound. However, in some statistical areas (such as the national accounts and the balance of payments), it is imperative for the two time series versions to have the same annual totals as they form part of an accounting framework which is required to balance. In such instances, the time series is adjusted in such a manner that its values add up to the same annual total as the original time series. This is accomplished by activating a function which is referred to as benchmarking[5] on JDemetra+. However, this adjustment can also be executed manually.

5 This is not the same as the benchmarking of economic statistics discussed under the 'Revision policy' section below.

## Revision policy

A seasonally adjusted time series should be revised either because of amendments to the original unadjusted data or because of a better estimation of the data due to new or additional information which has become available. Data-driven revisions can include methodological changes, the addition of new data, benchmarking, error corrections and annual data revisions. Methodological changes can include definition or classification changes, refinement, harmonisation and re-weighting.

To enhance the credibility and usefulness of economic statistics, it is important to have a clear revision practice and policy. A balance should be found between having the best possible seasonally adjusted statistics and avoiding frequent and/or insignificant data revisions. When and how often to revise a seasonally adjusted time series depends mostly on the nature of the revision. If there are major revisions to an original time series, the entire time series should be readjusted and revised, for example if subcomponents were re-weighted or if a sample change was introduced.

The SARB adheres to the following seasonal adjustment revision guidelines:

a When, and how regularly, to revise:

- for the addition of a new data point – once a year;
- for the revision of the underlying data – rerun the model in JDemetra+ if more than three data points are affected, otherwise once a year;
- for an annual sample change – when it is implemented;
- for a weight change – when it is implemented; and
- for benchmarking – when it is implemented.

b How far back are seasonal factors revised?

This depends mostly on the nature of the revision:

- for an annual update – not more than three years;
- for an underlying revision update – not more than three years;
- for a sample change – from the inception of the new sample;
- for re-weighting – from the inception of the new weights; and
- for benchmarking – from where the newly benchmarked unadjusted time series was revised.

Various revision options are available in JDemetra+, as listed in Table 2. The appropriate choice depends on the user or institution as well as the reason for, and frequency of, the revision. The SARB prefers to re-estimate the regression coefficients, in other words the partial concurrent adjustment. With this revision option, the model, filters, outliers and calendar regressors stay the same, and only the parameters and seasonal factors are re-estimated.

Table 2: Revision options in JDemetra+

| Option | Meaning |
|---|---|
| Current adjustment<br>(AO* approach) | Fix the model (including its parameters);<br>handle any new observation as an AO* |
| Fixed model | Re-estimation, with parameters fixed |
| Estimated regression coefficients | Re-estimation of the regression coefficients |
| + ARIMA parameters | and re-estimation of the parameters of the ARIMA model |
| + last outliers | and re-estimation of the outliers of the last year only |
| + all outliers | and re-estimation of all the outliers |
| + ARIMA model | and re-estimation of the ARIMA model |
| Concurrent adjustment | The reference specification is used |

* Additive outlier

## Conclusion

Seasonally adjusted time series estimates greatly enhance the analysis of economic statistics by providing historically comparative and meaningful observations to inform policy decisions. The SARB adheres to international best practice in its seasonal adjustment process, supported by the use of the JDemetra+ software package and accompanying methodological guidelines developed by Eurostat, as applied by the European Statistical System, the Deutsche Bundesbank, Eurostat and various other international statistical offices.

# The South African business cycle from 2013 to 2022

by J C Venter and A Wolhuter[1]

## Introduction

The South African Reserve Bank (SARB) has previously identified reference turning points in the South African business cycle for the period 1946 to 2013. These turning points have been discussed in various articles and notes published in earlier editions of the *Quarterly Bulletin (QB)*. The chronology of upper (peaks) and lower (troughs) turning points is published in the statistical tables section of the *QB*.[2] The most recently identified peak in the business cycle was November 2013 (Venter, 2016).

The purpose of this article is to identify and publish reference turning points in the South African business cycle after the November 2013 peak.

Over the past decade, the South African economy was impacted by several adverse global developments and domestic structural constraints which have led to a protracted period of heightened uncertainty and resulted in a gradual decline in the potential rate of economic growth (SARB, 2017). The domestic economy was also severely impacted on by the national lockdown restrictions imposed in 2020 after the global outbreak of the coronavirus disease 2019 (COVID-19) pandemic.

The article first describes the SARB's methodology to identify a reference turning point in the business cycle, including the business cycle definition used by the SARB. Thereafter, the statistical results are presented, followed by a brief overview of the main macroeconomic events and developments between 2013 and 2022. The article concludes with the identification of three reference turning point dates during this period.

## Methodology applied to identify reference turning points

The SARB determines reference turning points in the business cycle in terms of the *growth cycle* definition (Venter, 2005). Growth cycles represent the fluctuations around the long-term trend of aggregate economic activity and are also referred to as trend-adjusted business cycles. The SARB's business cycle chronology therefore represents reference turning point dates that distinguish between upward phases (periods when the rate of growth in aggregate economic activity either matched or exceeded the long-term trend) and downward phases (periods when aggregate economic activity either contracted or increased at a slower pace than its long-term trend).

Several statistical tools are used to identify a reference turning point in the business cycle. The SARB's three *composite business cycle indicators*[3] are continuously monitored for any indication of a possible turning point. The three composite business cycle indicators, which are independently compiled, each comprise economic indicators that are grouped together according to their ability to lead, coincide with or lag movements in the business cycle. The composite leading business cycle indicator currently combines 11 individual economic indicators which have historically preceded reference turning points in the business cycle. The composite coincident business cycle indicator incorporates five economic indicators which have historically coincided with reference turning points in the business cycle. Similarly, the composite lagging business cycle indicator constitutes seven economic indicators which have historically followed turning points in the business cycle.

When the composite business cycle indicators suggest that a turning point in the business cycle might have occurred, two comprehensive diffusion indices are compiled. The *current diffusion index* is a comprehensive composite index compiled from the actual month-to-month symmetrical percentage changes[4] in each of the 163 seasonally adjusted economic time series analysed. These indicators represent all the relevant economic processes in the various economic sectors, including production, sales, employment, wage and price developments,

1 The authors would like to thank N Ehlers and K Moagi of the Business Cycle Analysis Unit in the Economic Statistics Department of the SARB for their invaluable assistance in applying the statistical methods used in this analysis.

2 For the business cycle phases since 1945, see page S–164 in this edition of the *Quarterly Bulletin*.

3 A composite business cycle indicator is compiled by integrating different economic indicators into a single index.

4 The month-to-month symmetrical percentage change *(S)* in a time series *(X)* is calculated as:

$S_t = 200 * (X_t - X_{t-1}) / (X_t + X_{t-1})$.

The methodology to construct the current diffusion index is the same as that for the composite business cycle indicators.

monetary aggregates and investment. The deviation of the current diffusion index from its long-term trend provides a quantitative measure of the cyclical movement in aggregate economic activity (i.e. the growth cycle). It provides an indication of the depth (amplitude) and duration of the growth cycle phases, with the turning points serving as a proxy for reference turning points in the business cycle.

The *historical diffusion index* is defined as a measure of the dispersion of the changes in the same set of economic time series. This index is constructed by first determining the specific turning points (peak and trough dates) in the cyclical component (deviation from trend) of each of the 163 time series. Each monthly historical diffusion index value represents the number of time series that are increasing in that month (relative to each one's long-term trend) as a percentage of the total number of time series considered. An index value exceeding 50 indicates that more than half of the time series considered was increasing relative to their long-term trends in that month, implying that the economy was in an upward phase of the business cycle. Similarly, an index value below 50 indicates that the economy was in a downward phase of the business cycle in that month. Therefore, turning points in the historical diffusion index occur when the index passes through the 50 mark, with the index providing an indication of the duration and diffusion (dispersion among the economic indicators considered) of the growth cycle phases.

The SARB's growth (or deviation) cycle methodology makes extensive use of trend estimation to disaggregate time series into trend and cyclical components to identify reference turning points. The phase average trend (PAT) was developed specifically for identifying growth cycles (Boschan and Ebanks, 1978) and has historically been used by the National Bureau for Economic Research (NBER) in the United States (US) (Zarnowitz and Ozyildirim, 2006). An advantage of the PAT is that the variation in an economic time series is attributed equally to business cycle fluctuations and to other factors, such as major structural and technological changes, wars and financial crises. Zarnowitz and Ozyildirim (2006) found that the Hodrick–Prescott (HP) trend (Hodrick and Prescott, 1997) closely approximates the PAT when setting the smoothing parameter (lambda) as $\lambda$=108 000 for monthly time series. As such, the HP trend (with $\lambda$=108 000) was used for all trend estimations in this analysis.

However, most of the economic time series exhibited extreme outliers in the first half of 2020 because of the strict COVID-19 national lockdown (alert levels 4 and 5) that started on 26 March. These extreme outliers became problematic when decomposing a time series into its long-term trend and cyclical components, as they caused the statistical filtering technique to overstate the decline in the trend component before and during the pandemic period due to the smoothing inherent in such filtering techniques. The trend then declines even before the onset of the pandemic, suggesting some prior knowledge of the exogenous pandemic shock. This distortion to the cyclical component of a time series could affect the accurate identification of business cycle turning points.

To reduce the distortion created by the COVID-19-related outliers in the trend estimation of a non-stationary time series, a two-step approach was followed. Firstly, an HP trend (with $\lambda$=500) was estimated on the logarithm of the original economic time series to obtain proxy values for the pandemic outlier period. The values obtained from this low-lambda[5] HP trend filter were then substituted into an augmented version of the original time series to smooth out, or lessen the impact of, the severe outliers from March to June 2020. The conventional HP filter (with $\lambda$=108 000) was then estimated on the augmented version of the original time series to obtain a more appropriate trend, which was used to decompose the original unaltered time series into its trend and cyclical components.

The identification of a reference turning point in the business cycle is not purely a mechanical statistical exercise, and the statistical tools described above do not always indicate the same reference turning point date. Consequently, other macroeconomic indicators as well as significant economic events and developments occurring near a possible turning point must be considered when identifying a reference turning point date.

5 A lower lambda value generates a trend that shows less smoothed estimates and follows the original time series more closely, where a higher lambda value generates a more smoothed trend estimate.

## Statistical results

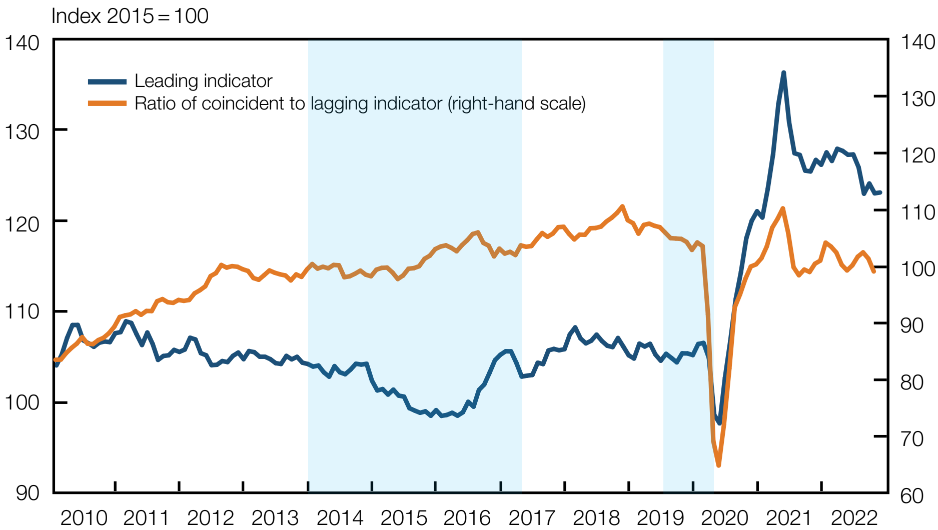
The methodology confirmed the previously identified reference peak in the business cycle of November 2013 and indicated three subsequent reference turning points in the business cycle during the 2013–2022 period. A lower turning point in April 2017 was followed by a peak in June 2019 and then another trough in April 2020.

## The composite business cycle indicators

The composite leading business cycle indicator peaked in February 2011 and then trended gradually lower for five years. This pointed to the progressive weakening in domestic economic activity. The leading indicator then troughed in April 2016 and trended higher up to February 2018, suggesting the commencement of an upward phase of the business cycle. An earlier study showed that the upward trend in the leading indicator signalled the end of the downward phase of the business cycle as the turning point signal from the leading indicator met the requirements of being pronounced, pervasive and persistent (Venter, 2020). Subsequently, the leading indicator again moved gradually lower to 2019, suggesting renewed weakness in domestic economic activity. The leading indicator then plummeted in the three months to May 2020 because of the COVID-19 lockdown. Based on its historical relationship with the business cycle, the leading indicator pointed to a possible trough in the business cycle towards the end of 2016 or in early 2017 as well as a subsequent peak in the second half of 2018 or the first half of 2019. The leading indicator then increased strongly until May 2021 before gradually receding due to COVID-19-related distortions and base effects (SARB, 2021).

The ratio of the composite coincident business cycle indicator relative to the composite lagging business cycle indicator serves as an additional leading indicator of the business cycle (Venter, 2004). This ratio increased up to August 2012 before moving sideways up to May 2015. Contrary to the leading indicator, the ratio did not decline over this period because the downturn was not caused by a typical overheating economy as on previous occasions but rather drifted gradually towards stagnation from the supply side, hampered by several supply constraints and heightened policy uncertainty (Laubscher, 2020). The ratio then trended higher up to November 2018, which suggested that an upward phase in the business cycle might have occurred. The ratio subsequently decreased notably up to May 2020, signalling another downward phase in the business cycle even before the onset of the COVID-19 pandemic.

Figure 1 Composite business cycle indicators

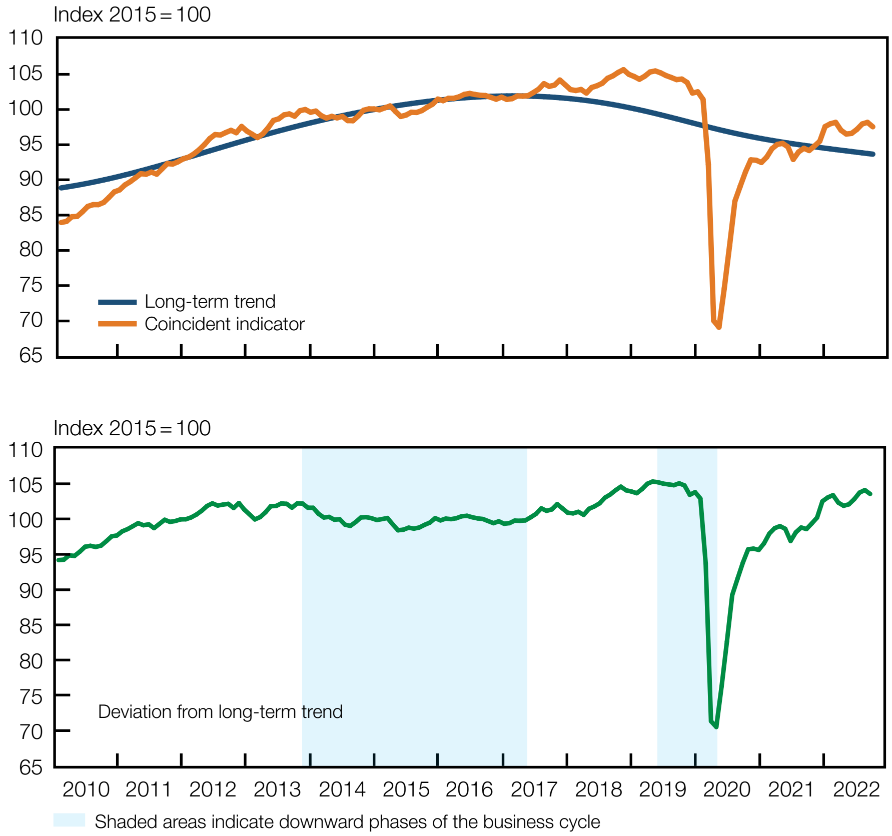



Shaded areas indicate downward phases of the business cycle

Source: SARB

The deviation of the composite coincident business cycle indicator from its long-term trend moved lower from November 2013 to mid-2015 before trending broadly sideways up to January 2017. The indicator then increased up to May 2019, suggesting that an upward phase in the business cycle had probably occurred, before declining during the remainder of the year and then plummeting in early 2020. The indicator increased strongly from June 2020 as economic activity started recovering from the COVID-19 lockdowns.

Figure 2 Composite coincident business cycle indicator

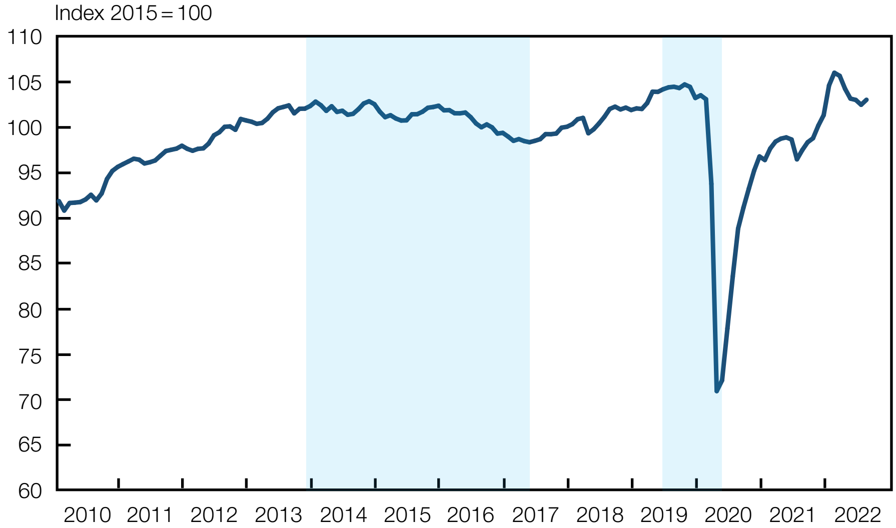



Source: SARB

## The current diffusion index

The deviation of the current diffusion index from its long-term trend increased steadily up to January 2014 before moving gradually lower up to May 2017. The indicator then increased up to October 2019, which indicated that an upward phase in the business cycle had likely occurred. The indicator then decreased significantly up to April 2020 before increasing strongly thereafter.

Figure 3 Current diffusion index (deviation from long-term trend)



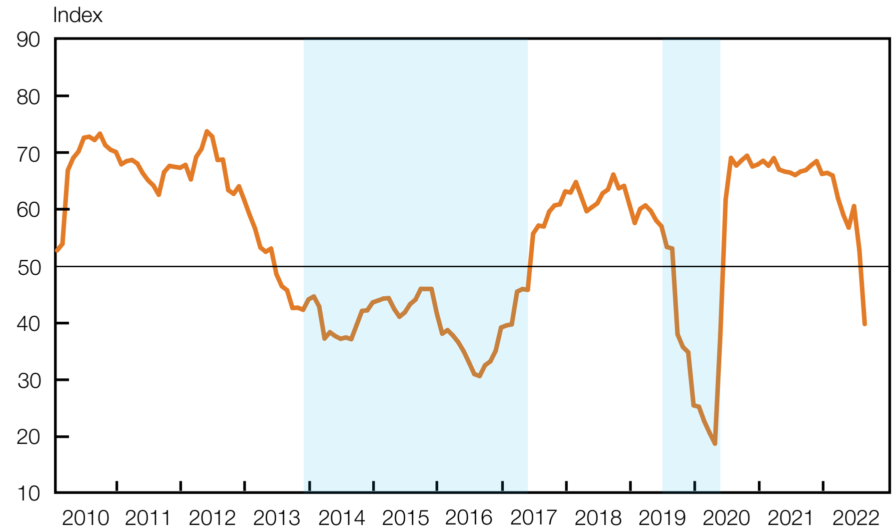

Shaded areas indicate downward phases of the business cycle

Source: SARB

## The historical diffusion index

The historical diffusion index fell below 50 in June 2013, which implied that the majority of the time series analysed decreased from that month onwards relative to their respective long-term trends. The indicator only moved back above 50 from June 2017, suggesting that a trough in the business cycle had been reached, and remained above that level until August 2019. The historical diffusion index then fell to as low as 18.7 in April 2020 before moving decisively through the 50 mark in June.

Figure 4 Historical diffusion index




Shaded areas indicate downward phases of the business cycle

Source: SARB

## Macroeconomic events and developments

Following the global financial crisis (GFC) of 2008–09, the South African economy experienced an unusual business cycle for more than a decade (Laubscher, 2020), marred by several adverse global developments and persistent domestic structural constraints which led to a prolonged period of heightened uncertainty. Such external events, coupled with domestic institutional, political and structural changes, have a significant impact on the evolution of the business cycle, as noted by Zarnowitz (1992): "How the economy moves over time depends on its structure, institutions and policies, all of which are subject to large historical changes". Amid increased volatility in most macroeconomic indicators, domestic economic activity expanded at a subdued pace throughout this period, with the amplitude of the business cycle becoming much smaller than previously, as aggregate economic activity fluctuated closely around this historically low growth trend. Another unique feature of this period was the lack of business confidence and fixed investment, which reflected the impact of these external developments and domestic structural constraints, such as:

- The post-GFC global economic recovery was relatively uneven, with fairly weak economic growth in the advanced economies, along with protracted accommodative (low interest rates) and unconventional (quantitative easing) monetary policy by most central banks. Resilient real economic growth in China during and immediately after the GFC slowed gradually from 2012 as that economy rebalanced away from infrastructure investment towards consumption expenditure. This exacerbated the decline in international commodity prices, to the detriment of commodity-exporting countries, including South Africa.

- Two exogenous shocks significantly affected the global and domestic economy between 2020 and 2022. First, the outbreak of the COVID-19 pandemic in December 2019 resulted in harsh lockdown restrictions globally, which caused severe global supply chain disruptions and fiscal policy interventions. Apart from the significant loss of life and concomitant pressure on the global health system, the dislocation between supply and demand resulted in a rapid acceleration in goods price inflation globally. Second, Russia's invasion of Ukraine in February 2022 deepened the global supply chain constraints and added further upward pressure to inflation, particularly of food and energy prices.

- Labour relations in South Africa deteriorated markedly in the first five years after the GFC, with numerous disruptive and often violent wage-driven industrial action drives, initially in the public sector in 2010 and later also in several other sectors, particularly mining. A five-month-long strike in the platinum-mining sector in the first half of 2014 resulted in a marked loss of mining output and export revenue.

- South Africa's fiscal position deteriorated steadily after the GFC and again in the wake of COVID-19. National government's budget deficit increased sharply to 4.2% of gross domestic product (GDP) in 2009 and remained around that level in subsequent years before increasing markedly to 9.8% of GDP at the end of fiscal 2020/21. Weak economic growth and lower international commodity prices constrained revenue, while the rapid increase in the public sector wage bill and frequent financial assistance to state-owned companies (SOCs) kept expenditure elevated. This resulted in the rapid increase in the total gross loan debt of national government, from 23.6% of GDP in the first quarter of 2009 to 71.0% of GDP in the fourth quarter of 2022.

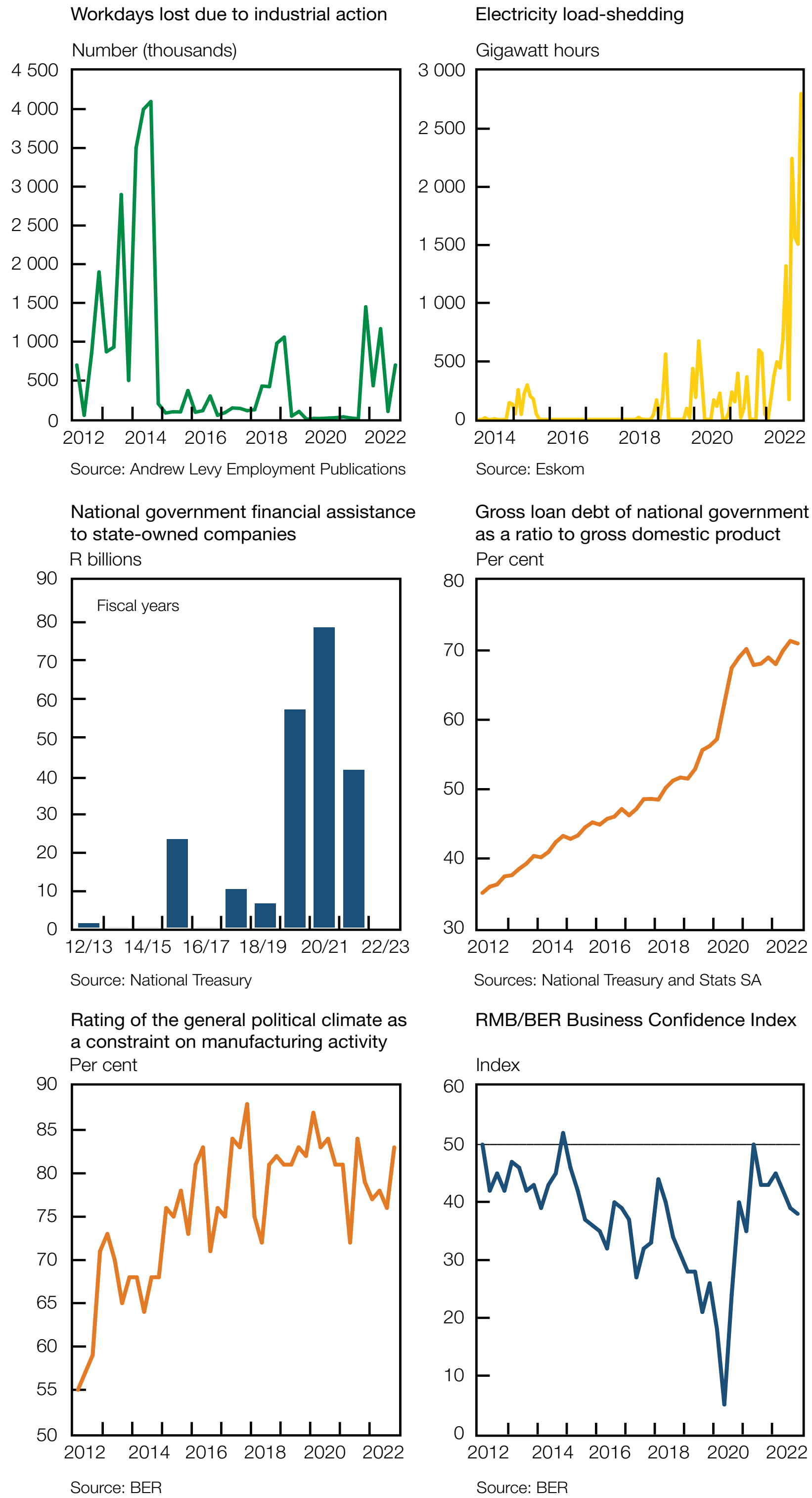
- The deterioration in South Africa's fiscal position resulted in successive sovereign credit rating downgrades by international ratings agencies, eventually to below investment grade, and South Africa's exclusion from the World Government Bond Index in April 2020. This contributed to an increase in South African government bond yields and the cost of capital.

- Domestic political developments have significantly impacted on the South African economy over the past decade. Widespread allegations of corruption, including the so-called state capture[6], inconsistent policy pronouncements as well as regulatory concerns in key sectors led to heightened economic policy uncertainty (Laubscher, 2020) and contributed to the erosion of confidence in the South African economy. A weakening of governance at public institutions contributed to the increased financial assistance to several SOCs.

6 This later led to the establishment of *The Judicial Commission of Inquiry into Allegations of State Capture, Corruption and Fraud in the Public Sector and Organs of State*. See https://www.sastatecapture.org.za/.

- The South African economy has experienced significant supply constraints over the past decade, including severe and ever-intensifying electricity-supply disruptions and a gradual deterioration in rail infrastructure. The insufficient electricity generation capacity has been exacerbated by long delays in the completion of two large coal-fired power stations (Medupi and Kusile) and a continuous increase in unplanned outages at existing power stations, despite the steady addition of independently produced renewable energy to the national grid. In addition, the price of electricity has increased significantly – by 241% – from December 2009 to December 2022, compared with an increase of 92.8% in the overall consumer price index over the same period. The rapidly rising cost and unreliable availability of electricity in South Africa has become a growing constraint to output growth in the domestic economy.

Figure 5 Selected structural constraints that impacted on the South African business cycle over the past decade



Some of these factors had already contributed to the demise of the post-GFC economic recovery and ushered in a downward phase of the business cycle in December 2013 (Venter, 2016). The empirical results discussed earlier confirmed that the downward phase was interrupted by a short and relatively weak upward phase before the onset of the COVID-19 pandemic. The main economic developments during each of the three identified business cycle phases from the end of 2013 to mid-2020 are discussed separately below.

## Downward phase: December 2013 to April 2017

Global economic growth slowed notably in 2012 after the initial post-GFC rebound and remained relatively weak and uneven among countries until 2016. Most of the advanced economies still suffered from the build-up to and overhang of the GFC, including high private and public debt levels. Fiscal austerity contributed to recessions in many European countries towards the end of 2011 and into 2012, as the level and cost of public debt raised fears about fiscal sustainability. Monetary policy in the advanced economies remained extremely accommodative throughout this period, with short-term interest rates in several countries remaining close to the zero lower bound for a protracted period. In addition, unconventional quantitative easing was used to provide financial market liquidity.

Weak economic growth in the advanced economies and the concomitant lower global demand led to a decline in international commodity prices from late 2011, with these prices only bottoming out at the end of 2015. In addition, commodity prices were also affected by the gradual slowdown in economic activity in China and its rebalancing away from fixed investment towards consumption expenditure. The decline in crude oil prices was initially muted as heightened geopolitical tensions led to increased precautionary demand, but then these prices declined markedly in 2014 and 2015. Global consumer price inflation remained subdued and generally within or below targets in most economies over this period.

Against this global backdrop, and with mounting domestic structural supply-side constraints, real GDP growth in South Africa slowed gradually from 2.5% in 2013 to 0.7% in 2016. Economic activity was constrained by turbulent labour relations, with as much as 11.8 million workdays lost due to industrial action in 2014, exacerbated by the five-month platinum-mining strike. Formal non-agricultural employment decreased during most of the downward phase as firms reduced their staff complement in response to the troubled labour relations environment and high wage settlements. Electricity-supply constraints also hampered economic activity with the re-introduction of intermittent electricity load-shedding from the fourth quarter of 2014. Throughout this downward phase, fixed investment was deterred by persistent industrial and trade policy uncertainty, particularly in the mining sector. The level of real gross fixed capital formation reached a peak in the fourth quarter of 2013 before contracting in six of the subsequent seven years, 2015 being the only exception.

These constraints contributed to the gradual erosion of business confidence, as reflected by the decline in the RMB/BER Business Confidence Index (BCI) from 47 index points in the first quarter of 2013 to a low of 27 in the second quarter of 2017.[7] However, the BCI showed some resilience in the second half of 2014 and the first half of 2015 as confidence among wholesalers and retailers increased notably. This highlights another unique feature of this downward phase, in that real household consumption expenditure initially held up well, growing by 2.2% in 2015 compared with only 0.7% in 2014, before slowing again in 2016. The resilience in household spending was supported by strong growth in the disposable income of households, underpinned by notable increases in real remuneration per worker in the formal non-agricultural sector. This coincided with a deceleration in consumer price inflation in 2015 as the sharp decrease in international crude oil prices lowered domestic fuel prices. However, core inflation did not slow as much and accelerated again to close to the upper limit of the inflation target range in 2016, in part due to the sharp depreciation in the exchange value of the rand in the second half of 2015. Consequently, monetary policy had to be pro-cyclical, with a 200 basis points increase in the repurchase (repo) rate between January 2014 and March 2016 to keep consumer price inflation within the target range and to anchor inflation expectations.

7 Unlike during previous upward phases of the business cycle, the RMB/BER BCI barely reached the neutral 50 level during the post-GFC upward phase due to the presence of some structural constraints.

Fiscal policy was also unable to support economic activity in a contra-cyclical way during the downward phase of the business cycle as national government had to embark on a path of fiscal consolidation to rein in the budget deficit that had increased to 4.9% of GDP at the end of fiscal 2012/13 in the wake of the GFC. As a result, national government's gross loan debt increased from 23.6% of GDP at the end of fiscal 2008/09 to 37.6% of GDP at the end of fiscal 2012/13, and further to 46.2% of GDP at the end of fiscal 2016/17. Government finances were further constrained by financial assistance to SOCs.

The combination of global developments and domestic constraints resulted in significant net sales of domestic shares and bonds by non-residents from mid-2015 to early 2017, with the exchange value of the rand depreciating notably during 2015. Weak domestic demand lowered merchandise imports, and South Africa's trade balance with the rest of the world switched from large deficits between 2013 and 2015 to surpluses in 2016 and 2017. This assisted in narrowing the deficit on the current account of the balance of payments, from 6.2% of GDP in the third quarter of 2013 to 1.9% of GDP in the first quarter of 2017.

## Upward phase: May 2017 to June 2019

Global economic activity gained some momentum in the second half of 2016. Economic growth accelerated in the US as inventories started contributing positively to growth, while stronger domestic demand supported output in the euro area and the United Kingdom (UK) on the back of resilient spending in the aftermath of the June 2016 referendum in favour of the UK leaving the European Union. Global economic growth strengthened further to 3.8% in 2017 – the fastest pace since 2011. The acceleration was broad-based among the advanced and emerging market economies, and reflected a recovery in fixed investment and a notable rebound in global trade. The increase in commodity prices from early 2016 also benefitted commodity-exporting countries during 2017 and 2018.

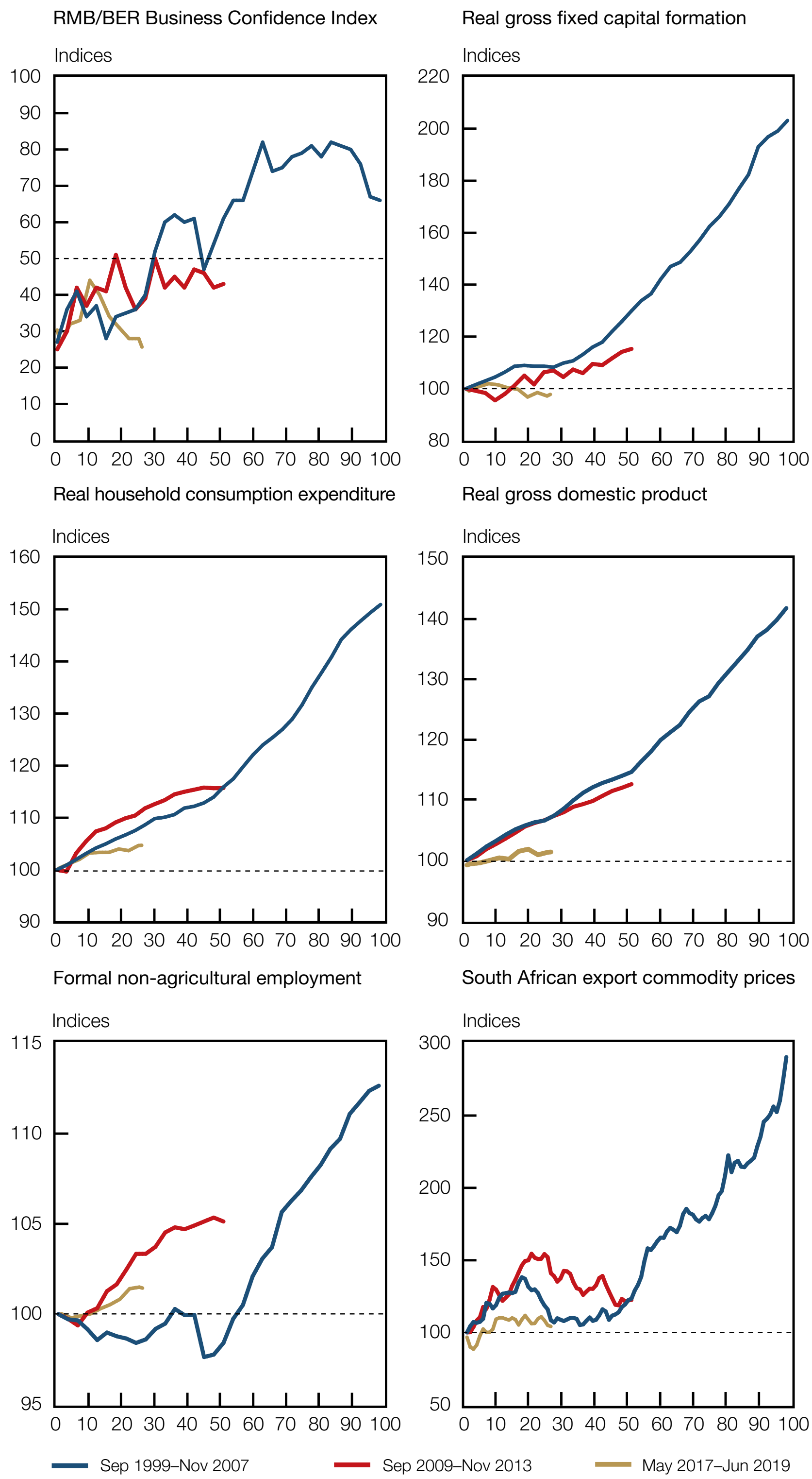
The higher commodity prices contributed to a gradual acceleration in global inflation from the second half of 2016 following years of very subdued price pressures. The increase in global producer price inflation was more pronounced than in consumer price inflation, reflecting the greater weight of commodities in producer price indices and their importance as intermediate inputs in production. In 2018, consumer price inflation in the advanced economies slowed again on account of lower commodity prices while accelerating in some of the emerging market economies following earlier currency depreciations. Core inflation stayed well below central bank targets in almost all the advanced economies as wage and unit labour costs remained tepid throughout this period. Although most central banks in the advanced economies continued the gradual normalisation of monetary policy by reducing the pace of asset purchases and steadily raising short-term interest rates, global monetary policy remained accommodative.

In South Africa, real GDP growth accelerated to 1.2% in 2017 and further to 1.5% in 2018. The improvement resulted mainly from increased consumer demand as growth in real household consumption expenditure accelerated from 0.7% in 2016 to 1.7% and 2.7% in the subsequent two years respectively, supported by robust growth in disposable income. Despite the slowdown in nominal wage growth in 2018, real remuneration per worker increased notably due to the deceleration in consumer price inflation, particularly food price inflation. Consumer spending was further supported by a moderate increase in formal employment, largely in the services sectors. Following a protracted slowdown from the end of 2012, growth in bank credit extended to households accelerated gradually from around 3.0% in mid-2017 to 6.5% by mid-2019.

In contrast to the acceleration in household consumption expenditure, both real gross fixed capital formation and real final consumption expenditure by general government contracted in 2017 and 2018 as the domestic structural constraints persisted. Fixed investment was still hindered by the lack of business confidence. Despite increasing from 27 index points in the second quarter of 2017 to 44 in the first quarter of 2018, the BCI remained below the neutral 50 mark throughout. The increase in the BCI in the first quarter of 2018 followed the election of President Cyril Ramaphosa as leader of the ruling party in December 2017, along with expectations that the policy uncertainty and structural impediments to economic growth would be addressed. The optimism was also visible in the FNB/BER Consumer Confidence Index, which increased significantly from -8 in the fourth quarter of 2017 to 26 in the first quarter of 2018 before receding gradually during the next two years.

Government finances were still constrained as the budget deficit increased again from 3.5% of GDP at the end of fiscal 2016/17 to 4.2% of GDP in fiscal 2018/19, while national government's gross loan debt increased further to 51.5% of GDP as at 31 March 2019. Both headline and core consumer price inflation slowed gradually in the three years to mid-2019 and moved below the 4.5% midpoint of the inflation target range at the end of 2017. Inflation expectations also receded closer to the midpoint of the target range over this period. This allowed the SARB's Monetary Policy Committee (MPC) to lower the repo rate twice by 25 basis points each in July 2017 and March 2018.

Figure 6 Upward phase comparison of selected economic indicators*




Months of upward phases

* Measured in months

Source: SARB

## Downward phase: July 2019 to April 2020

Following a broad-based cyclical upswing that lasted nearly two years, global economic growth slowed in the second half of 2018 and further in 2019 amid increased trade tensions and tariff hikes between the US and China, lower business confidence, tighter financial conditions and increased policy uncertainty in many economies. The slowdown was geographically broad-based and caused growth in global trade to stall in 2019. The global expansion from mid-2016 to mid-2018 did not generate sustained increases in core inflation, and as global growth slowed, it fell further below target across the advanced economies and below historical averages in many emerging market and developing economies. As a result, global monetary policy was eased during 2019.

Against this backdrop, the first case of COVID-19 was discovered in China in December 2019. The virus spread rapidly across the world, and the World Health Organization declared COVID-19 a global pandemic on 11 March 2020. To curb the spread of the virus and save lives, the co-ordinated global response included, among other measures, national lockdowns that prohibited human mobility and led to a sudden stop in economic activity in almost all countries, plunging the global economy into a severe and synchronised recession, leading to sharp declines in commodity prices and causing financial market turmoil. Significant fiscal packages were swiftly introduced in most countries to cushion the impact of the sharp contraction in economic activity on firms and households.

Besides the sharp contraction in economic activity and significant job losses, the national lockdowns and concomitant port closures severely disrupted global supply chains. But as the lockdown restrictions were eased and economies started to reopen from around mid-2020, global demand for goods recovered much faster than initially anticipated and exceeded the availability of resources. Shortages of raw materials and of some finished goods intensified as inventories were quickly depleted. This was exacerbated by long delays at ports, the displacement of freight containers and, in some instances, shortages of labour. As demand for consumer goods persisted, these inventory and container shortages resulted in sharp increases in global shipping costs and the prices of raw materials, causing an acceleration in global inflation to multi-decade highs in 2022 (Wolhuter, 2022).

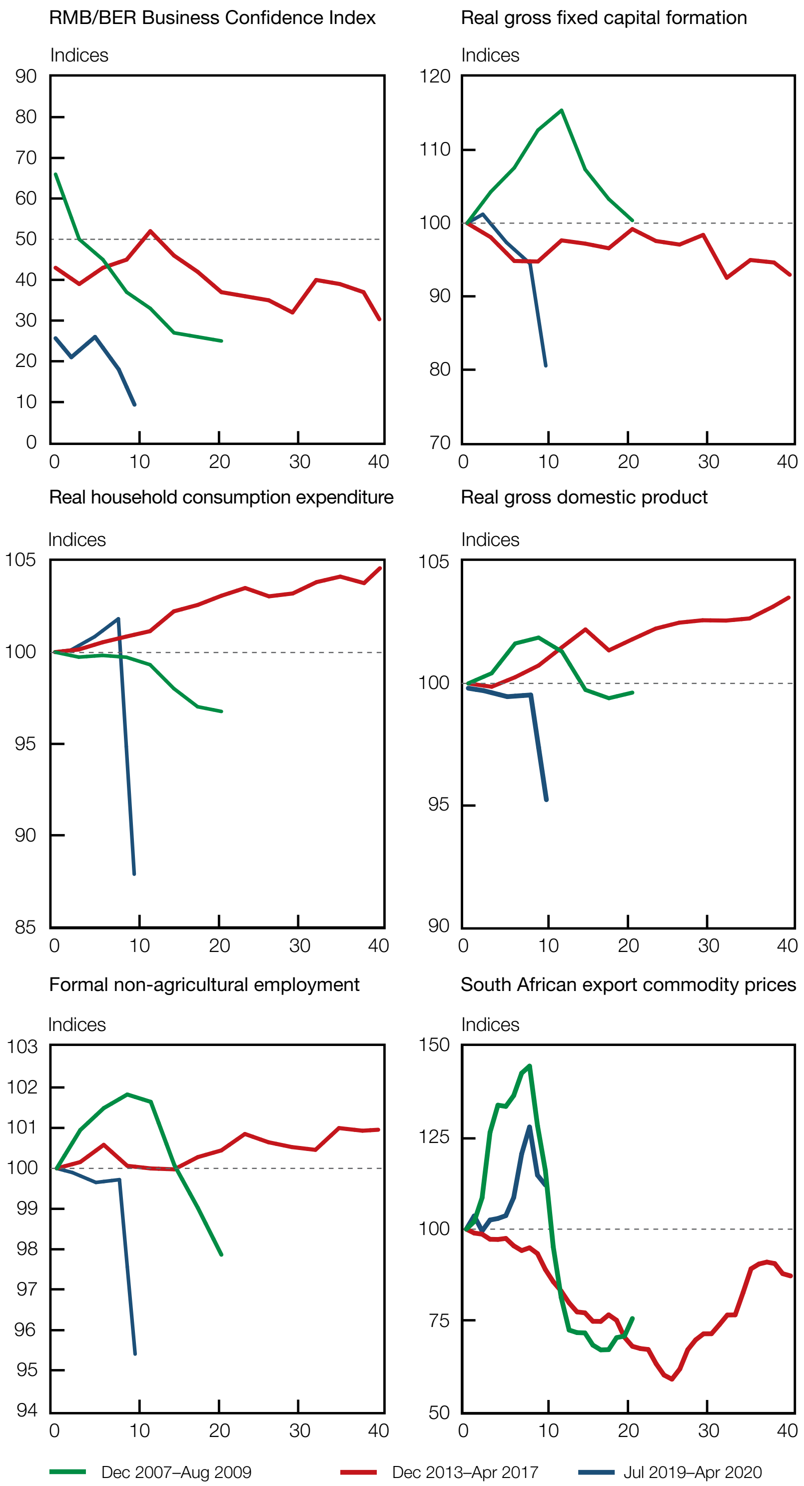
While the global economy was still recovering from the COVID-19 pandemic, Russia invaded Ukraine on 24 February 2022. This resulted in renewed global supply chain constraints and a surge in energy and food prices, adding to global inflationary pressures. Whereas central banks had responded to the COVID-19 pandemic by abruptly lowering policy interest rates in 2020, they reverted to aggressive policy tightening in 2022 to rein in inflation.

Following the slowdown in global economic growth, economic activity in South Africa also started to falter from the second half of 2019. Real GDP increased by only 0.1% (not annualised) in the third quarter of 2019 and recorded no growth in the subsequent two quarters. Formal non-agricultural employment contracted in the final two quarters of 2019, led by job losses in the private sector. Real final consumption expenditure by households remained relatively resilient over this period, while real spending by general government slowed notably and gross fixed capital formation contracted sharply.

The first case of COVID-19 in South Africa was detected early in March 2020, with a national state of disaster declared on 15 March and a national lockdown imposed from 27 March. The lockdown lasted much longer than initially anticipated, with the restrictions easing only gradually in the subsequent months. The lockdown measures, which included restrictions on mobility, the prohibition of non-essential economic activity as well as international and domestic travel bans, had a dramatic impact on the South African economy. In the second quarter of 2020, real GDP contracted by 17.1% (not annualised), real final consumption expenditure by households contracted by 20.5%, real gross fixed capital formation contracted by 22.1% and total employment fell by 2.2 million. While output and consumption rebounded from the third quarter of 2020, the recovery in fixed investment and employment took much longer. The biggest economic impact was experienced in April 2020, with industrial production as well as real wholesale, retail and new vehicle sales plummeting to historic lows before recovering from May onwards.

South Africa's already constrained government finances were severely impacted by the COVID-19 pandemic. While significant revenue losses resulted from the contraction in economic activity and employment, expenditure increased significantly as government assisted affected sectors and citizens through, among other things, the Temporary Employer/Employee Relief Scheme to compensate employees who were affected by workplace shutdowns during the lockdown and the special COVID-19 social relief of distress grant. Consequently, the budget deficit increased markedly to 9.8% of GDP at the end of fiscal 2020/21 while national government's gross loan debt increased to 70.2% of GDP as at 31 March 2021.

Figure 7 Downward phase comparison of selected economic indicators*




Months of downward phases
* Measured in months

Source: SARB

The SARB responded to the pandemic by providing additional liquidity to the financial markets, buying government bonds in the secondary market, and lowering the repo rate by a cumulative 300 basis points between January and July 2020. Monetary policy was subsequently tightened again from November 2021, as economic activity recovered from the effects of the pandemic and as inflationary pressures mounted on account of the global supply chain disruptions and later also the war in Ukraine.

## Conclusion

The South African economy transitioned into a downward phase of the business cycle towards the end of 2013, hampered by supply-side constraints and economic policy uncertainty. Without much support from global economic activity, output growth trended gradually lower during the subsequent three and a half years.

Global economic growth accelerated somewhat from the second half of 2016, lifting international commodity prices. This supported an increase in domestic economic activity from around mid-2017, and the South African economy moved into a relatively short and mild upward phase of the business cycle, characterised mainly by stronger growth in household consumption expenditure. However, by mid-2019 the upswing had lost momentum again in the wake of weaker global economic activity, low business confidence and persistent supply-side constraints.

In the first quarter of 2020, the outbreak of the COVID-19 pandemic severely impacted on global economic activity due to the widespread imposition of national lockdowns. In South Arica, the biggest impact was experienced in April 2020, with economic activity improving from May onwards.

Considering the statistical results and macroeconomic developments, the reference date for the lower turning point in the South African business cycle was established as April 2017, with the downward phase of the business cycle lasting 41 months. The subsequent moderate upward phase lasted 26 months, with June 2019 identified as the reference peak. The ensuing downward phase lasted only 10 months up to April 2020 but was extremely severe due to the impact of the exogenous COVID-19 shock. The domestic economy then entered an upward phase of the business cycle in May 2020 as the recovery from the COVID-19 lockdowns commenced.

## References

C Boschan and W W Ebanks, 'The phase-average trend: a new way of measuring growth', in *1978 Proceedings of the Business and Economic Statistics Section,* 1978, Washington, D.C.: American Statistical Association.

R J Hodrick and E C Prescott, 'Postwar U.S. business cycles: an empirical investigation', *Journal of Money Credit and Banking* 29(1), 1997, pp 1–16.

International Monetary Fund, *World Economic Outlook*, various editions: April 2014 to April 2022, Washington, D.C.: International Monetary Fund.

P Laubscher, 'A History of South Africa's Modern Business Cycle', in *Business cycles and structural change in South Africa,* edited by W Boshoff, 2020, pp 111–166, Heidelberg: Springer.

South African Reserve Bank, 'Box 6: The output gap, potential growth and supply shocks', in *Monetary Policy Review*, 2017 (October), pp 23–24, Pretoria: South African Reserve Bank.

South African Reserve Bank, 'Box 2: Unpacking the recent strong increase in the composite leading business cycle indicator', in *Quarterly Bulletin 300,* 2021 (June), pp 24–29, Pretoria: South African Reserve Bank.

J C Venter, 'Note on the revision and significance of the composite lagging business cycle indicator', in *Quarterly Bulletin 234*, 2004 (December), pp 70–76, Pretoria: South African Reserve Bank.

J C Venter, 'Reference turning points in the South African business cycle: recent developments', in *Quarterly Bulletin 237*, 2005 (September), pp 102–112, Pretoria: South African Reserve Bank.

J C Venter, 'Business cycles in South Africa from 2009 to 2013', in *Quarterly Bulletin 279,* 2016 (March), pp 102–112, Pretoria: South African Reserve Bank.

J C Venter, 'Assessing the 2013 and 2017 Business Cycle Turning Points Signalled by the SARB's Composite Leading Business Cycle Indicator', in *Business cycles and structural change in South Africa,* edited by W Boshoff, 2020, pp 265–284, Heidelberg: Springer.

A Wolhuter, 'Monitoring supply chain pressures through the construction of a composite supply chain pressure index', paper presented at the 36th conference of the Centre for International Research on Economic Tendency Surveys (CIRET) titled *Economic Tendency Surveys and Economic Policy* in Istanbul, Turkey, 14–17 September 2022.

V Zarnowitz, *Business cycles: theory, history, indicators and forecasting,* 1992, Chicago: University of Chicago Press.

V Zarnowitz and A Ozyildirim, 'Time series decomposition and measurement of business cycles, trends and growth cycles', *Journal of Monetary Economics* 53, 2006, pp 1717–1739.

# Notes to tables

## Life and non-life insurers – tables on pages S–40 and S–42

The income statement statistics of life and non-life insurers, as published on pages S–40 and S–42 respectively in this edition of the *Quarterly Bulletin (QB)*, have been revised from the first quarter of 2021. The following changes have been implemented:

- In the life insurers table (KB238) on page S–40, both life business premiums and surrenders now exclude insurance and investment product switches.
- In both the life insurers table (KB238) on page S–40 and the non-life insurers table (KB241) on page S–42, the net capital profit or loss on investments, assets and other income now excludes the net change in reserves for claims and benefits.

## Current and capital account: selected ratios by institutional sector – experimental table on page E–4

The experimental integrated economic accounts (IEA) statistical estimates are extended in this edition of the *QB* with the addition of institutional sector ratios for selected current and capital account balancing items in table KB912. The table provides, in a time series format, the ratios of each institutional sector as a percentage of the total economy for gross value added (GVA), gross operating surplus (GOS), gross disposable income, gross saving and gross capital formation. The table also includes the net lending/borrowing of the institutional sectors as a ratio of nominal gross domestic product (GDP).

## Composition of institutional sector wealth – experimental table on page E–12

The experimental IEA statistical estimates are extended in this edition of the *QB* with the addition of the institutional sector composition of wealth in table KB913. The table includes both the net financial wealth[1] and the net wealth[2] balances, as derived from the financial and non-financial balance sheets, as well as ratios of all the institutional sector wealth aggregates to nominal GDP.

1 Net financial wealth is the value of the total financial assets owned by an institutional sector *minus* the value of its total liabilities.

2 Net wealth is the value of all the financial and non-financial assets owned by an institutional sector *minus* the value of all its outstanding liabilities.

# Abbreviations

| | |
|---|---|
| *2022 MTBPS* | *2022 Medium-Term Budget Policy Statement* |
| AFD | Agence Française de Développement |
| AIC | Akaike Information Criterion |
| Alsi | All-Share Index |
| AO | additive outlier |
| ARIMA (model) | autoregressive integrated moving average (model) |
| BCI | Business Confidence Index |
| BER | Bureau for Economic Research (Stellenbosch University) |
| BIS | Bank for International Settlements (Switzerland) |
| CBOE | Chicago Board Options Exchange |
| CIRET | Centre for International Research on Economic Tendency Surveys (Switzerland) |
| CIT | corporate income tax |
| COICOP | classification of individual consumption by purpose |
| COVID-19 | coronavirus disease 2019 |
| CPD | Corporation for Public Deposits |
| CPI | consumer price index |
| CTSE | Cape Town Stock Exchange |
| DGI | Data Gaps Initiative |
| EMBI+ | Emerging Markets Bond Index Plus (JPMorgan) |
| ESD | Economic Statistics Department (South African Reserve Bank) |
| FAO | Food and Agriculture Organization (United Nations) |
| FATF | Financial Action Task Force (France) |
| Fed | Federal Reserve (United States) |
| FNB | First National Bank |
| FRA | forward rate agreement |
| FX | foreign exchange |
| G20 | Group of Twenty |
| GDE | gross domestic expenditure |
| GDP | gross domestic product |
| GFC | global financial crisis |
| GOS | gross operating surplus |
| GVA | gross value added |
| HP (trend) | Hodrick-Prescott (trend) |
| HQLA | high-quality liquid assets |
| I/C (ratio) | irregular-to-cyclical (ratio) |
| IEA | integrated economic accounts |
| IGC | International Grains Council (England) |
| IIP | international investment position |
| ILO | International Labour Organization (Switzerland) |
| IMF | International Monetary Fund (United States) |
| IPP | independent power producer |
| Jibar | Johannesburg Interbank Average Rate |
| JSE | JSE Limited |

| | |
|---|---|
| LCR | liquidity coverage ratio |
| M3 | money supply |
| MPC | Monetary Policy Committee (South African Reserve Bank) |
| MPIF | monetary policy implementation framework |
| *MTBPS* | *Medium Term Budget Policy Statement* |
| NAAMSA | naamsa \| The Automotive Business Council |
| NBER | National Bureau for Economic Research (United States) |
| NEER | nominal effective exchange rate |
| NEET | not in employment, education programmes or training |
| OECD | Organisation for Economic Co-operation and Development |
| OTC | over the counter |
| PAT | phase average trend |
| PAYE | pay as you earn |
| PGM | platinum group metal |
| PIC | Public Investment Corporation |
| PIT | personal income tax |
| PPP | public-private partnership |
| *QB* | *Quarterly Bulletin* |
| *QES* | *Quarterly Employment Statistics* |
| *QLFS* | *Quarterly Labour Force Survey* |
| RAF | Road Accident Fund |
| REER | real effective exchange rate |
| RegArima (model) | regression and ARIMA (model) |
| repo (rate) | repurchase (rate) |
| RMB | Rand Merchant Bank |
| ROW | rest of the world |
| SA | South Africa(n) |
| SABC | South African Broadcasting Corporation |
| Sabor | South African Benchmark Overnight Rate |
| SACU | Southern African Customs Union |
| SAGIS | South African Grain Information Service |
| SAMOS (system) | South African Multiple Option Settlement (system) |
| SARB | South African Reserve Bank |
| SARS | South African Revenue Service |
| SDR | special drawing right |
| SOC | state-owned company |
| S&P | Standard & Poor's (United States) |
| Stats SA | Statistics South Africa |
| TB | Treasury bill |
| UK | United Kingdom |
| US | United States |
| USDA | United States Department of Agriculture |
| VAT | value-added tax |
| VIX | Volatility Index |
| X13 | X13 ARIMA-SEATS |
| XDR | IMF SDR exchange rate |